



# CITY OF CAMBRIDGE

## BOARD OF ZONING APPEAL

831 Massachusetts Avenue, Cambridge MA 02139

617-349-6100

2021 NOV -8 PM 1:25

OFFICE OF THE CITY CLERK  
CAMBRIDGE, MASSACHUSETTS

### BZA Application Form

**BZA Number:** 146140

#### General Information

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit: X

Variance:         

Appeal:         

**PETITIONER:** Rindge Towers Apartments LLC C/O Simon Brighenti Centerline Communications, LLC

**PETITIONER'S ADDRESS:** 107 Galaska Dr, West Springfield, MA 01089

**LOCATION OF PROPERTY:** 402 Rindge Ave , Cambridge, MA

**TYPE OF OCCUPANCY:** Telecommunications

**ZONING DISTRICT:** Residence C-2 Zone

#### **REASON FOR PETITION:**

/Telecommunication Facility (antenna)/


#### **DESCRIPTION OF PETITIONER'S PROPOSAL:**

The applicant had an operating facility on the rooftop of a nearby building. The landlord required immediate removal due to renovations. The applicant obtained a temporary building permit and installed the facility in the current location on the current building. This application seeks to obtain approval to maintain the facility as it now exists on the building. There will be no significant change to the existing configuration or equipment.

#### **SECTIONS OF ZONING ORDINANCE CITED:**

Article: 4.000	Section: 4.32.G.1 (Telecommunication Facility).
Article: 4.000	Section: 4.40 (Footnote 49) Telecommunication Facility).
Article: 10.000	Section: 10.40 (Special Permit).
Article: 6409A	Section: Middle Class Tax Relief and Job Creation act (aka Spectrum Act).

Original  
Signature(s):

  
(Petitioner (s) / Owner)

SIMON J. BRIGHENTI, JR.  
(Print Name)

Address:

SIMON J. BRIGHENTI, JR.  
CENTERLINE COMMUNICATIONS, LLC  
750 W. CENTER STREET  
WEST BRIDGEWATER, MA 02379

Tel. No. (413) 237-1550

Date: 11/1/2021.

E-Mail Address: sbrighenti@clinellc.com

**BZA APPLICATION FORM - OWNERSHIP INFORMATION**

*To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.*

I/We Rindge Towers Apartments, LLC

(OWNER)

Address: 1035 Cambridge Street, #12, Cambridge, MA 02141

State that I/We own the property located at 402 Rindge Street,  
which is the subject of this zoning application.

The record title of this property is in the name of \_\_\_\_\_  
Rindge Towers Apartments, LLC

\*Pursuant to a deed of duly recorded in the date 12/22/2015, Middlesex South  
County Registry of Deeds at Book 66573, Page 239; or  
Middlesex Registry District of Land Court, Certificate No. \_\_\_\_\_  
Book \_\_\_\_\_ Page \_\_\_\_\_

SIGNATURE BY LAND OWNER OR  
AUTHORIZED TRUSTEE, OFFICER OR AGENT\*

\*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Middlesex

The above-name Carl Nagy-Kochlin personally appeared before me,  
this 23<sup>rd</sup> of September, 2021, and made oath that the above statement is true.

Notary

My commission expires 11/16/23 (Notary Seal).

- If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.



GERALDINE M. ZIPSER  
Notary Public  
Commonwealth of Massachusetts  
My Commission Expires  
November 16, 2023

## **BZA Application Form**

### **SUPPORTING STATEMENT FOR A SPECIAL PERMIT**

**Please describe in complete detail how you meet each of the following criteria referring to the property and proposed changes or uses which are requested in your application. Attach sheets with additional information for special permits which have additional criteria, e.g.; fast food permits, comprehensive permits, etc., which must be met.**

**Granting the Special Permit requested for 402 Rindge Ave , Cambridge, MA (location) would not be a detriment to the public interest because:**

**A) Requirements of the Ordinance can or will be met for the following reasons:**

See attached Request for Administrative Review

**B) Traffic generated or patterns of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons:**

See attached Request for Administrative Review

**C) The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:**

See attached Request for Administrative Review

**D) Nuisance or hazard would not be created to the detriment of the health, safety, and/or welfare of the occupant of the proposed use or the citizens of the City for the following reasons:**

See attached Request for Administrative Review

**E) For other reasons, the proposed use would not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this ordinance for the following reasons:**

See attached Request for Administrative Review

**\*If you have any questions as to whether you can establish all of the applicable legal requirements, you should consult with an attorney.**



## BZA Application Form

### DIMENSIONAL INFORMATION

**Applicant:** Rindge Towers Apartments LLC

**Present Use/Occupancy:** Telecommunications

**Location:** 107 Galaska Dr

**Zone:** Residence C-2 Zone

**Phone:** (413) 237-1550

**Requested Use/Occupancy:** Telecommunications

	<u>Existing Conditions</u>	<u>Requested Conditions</u>	<u>Ordinance Requirements</u>	
<u>TOTAL GROSS FLOOR AREA:</u>	N/A	N/A	N/A	(max.)
<u>LOT AREA:</u>	N/A	N/A	N/A	(min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA: <sup>2</sup></u>	N/A	N/A	N/A	
<u>LOT AREA OF EACH DWELLING UNIT</u>	N/A	N/A	N/A	
<u>SIZE OF LOT:</u>				
WIDTH	N/A	N/A	N/A	
DEPTH	N/A	N/A	N/A	
<u>SETBACKS IN FEET:</u>				
FRONT	N/A	N/A	N/A	
REAR	N/A	N/A	N/A	
LEFT SIDE	N/A	N/A	N/A	
RIGHT SIDE	N/A	N/A	N/A	
<u>SIZE OF BUILDING:</u>				
HEIGHT	N/A	N/A	N/A	
WIDTH	N/A	N/A	N/A	
<u>RATIO OF USABLE OPEN SPACE TO LOT AREA:</u>	N/A	N/A	N/A	
<u>NO. OF DWELLING UNITS:</u>	N/A	N/A	N/A	
<u>NO. OF PARKING SPACES:</u>	N/A	N/A	N/A	
<u>NO. OF LOADING AREAS:</u>	N/A	N/A	N/A	
<u>DISTANCE TO NEAREST BLDG. ON SAME LOT</u>	N/A	N/A	N/A	

Describe where applicable, other occupancies on the same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g; wood frame, concrete, brick, steel, etc.

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.



# Radio Frequency Safety Survey Report Prediction (RFSSRP)

## AT&T Wireless Rooftop Facility

<p><b><u>Site ID:</u></b> MAL05892</p> <p><b><u>Site Name:</u></b> Cambridge Rindge Avenue</p> <p><b><u>Address:</u></b> 402 Rindge Avenue, Cambridge, MA 02140</p> <p><b><u>Latitude:</u></b> 42.393153</p> <p><b><u>Longitude:</u></b> -71.139775</p> <p><b><u>USID:</u></b> 307559</p> <p><b><u>FA:</u></b> 15633690</p>	<p><b><u>Prepared for:</u></b> AT&amp;T New England</p> <p><b><u>Report Writer:</u></b> Alex Van Abbema</p> <p><b><u>Date:</u></b> June 23, 2021</p> <p><b><u>Report Reviewer:</u></b> Brandon Green</p>
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### **Statement of Compliance**

AT&T is compliant with FCC Regulations.

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## 1.0 GENERAL SUMMARY

Centerline Communications, LLC (“Centerline”) has been contracted to provide a Radio Frequency (RF) Analysis for the following AT&T Mobility wireless rooftop facility to determine whether the facility is in compliance with federal standards and regulations regarding RF emissions. This analysis includes theoretical emissions calculations, for all equipment for AT&T Mobility .

### 1.1 SITE SUMMARY

Analysis Site Data	
Site USID:	307559
Site FA#:	15633690
Site Name:	Cambridge Rindge Avenue
Site Address:	402 Rindge Avenue, Cambridge MA 02140
Site Latitude:	42.393153
Site Longitude:	-71.139775
Facility Type:	Rooftop
Compliance Summary	
Compliance Status:	Compliant
Maximum Modeled AT&T MPE% on Walking Surface (General Public Limit):	98.20%
Maximum Modeled AT&T MPE% at Ground Level (General Public Limit):	0.04%
Site Survey Data	
Is Access Locked or Controlled? :	Unknown
Lock or Control Measures if Present:	Unknown
Parapet Height:	N/A
Site Data Information	
CD:	MA2009 Plan & Elevation (Rindge Ave) 20210610
RFDS:	NEW-ENGLAND_BOSTON_MA5892_2021-New-Site_Mandatory-Cell-Relo_ra9161_2101A0ZQAJ_15633690_307559_06-10-2021_Preliminary-In-Progress



Signage and barriers are the primary means of mitigating access to accessible areas of exposure. Below is a summary of existing and recommended signage at this AT&T facility.

Existing Signage and Barriers (AT&T Sectors)										
Location	Information	Notice	Notice 2	Caution	Caution 2	Caution 2B	Caution 2C	Warning	Warning 2	Barriers
Alpha	0	0	0	0	0	0	0	0	0	0
Beta	0	0	0	0	0	0	0	0	0	0
Gamma	0	0	0	0	0	0	0	0	0	0

Recommended Signage and Barriers (AT&T Sectors) – Actions that MUST be Taken						
Location	Notice 2	Caution 2	Caution 2B	Caution 2C	Warning 2	Barriers
Alpha	0	0	0	2	0	0
Beta	0	0	0	0	0	0
Gamma	2	0	0	0	0	0

Final Compliant Configuration (AT&T Sectors) – All Mitigation Items that MUST be in Place										
Location	Information	Notice	Notice 2	Caution	Caution 2	Caution 2B	Caution 2C	Warning	Warning 2	Barriers
Alpha	0	0	0	0	0	0	2	0	0	0
Beta	0	0	0	0	0	0	0	0	0	0
Gamma	0	0	2	0	0	0	0	0	0	0

#### AT&T Policy Items:

##### Alpha:

- Install (2) Caution 2C signs behind the antennas at Alpha

##### Gamma:

- Install (2) Notice 2 signs below Gamma sector.





### 3.0 ANTENNA INVENTORY

ANT ID	Operator	Antenna Make	Antenna Model	Type	Freq (MHz)	TPO (Watts)	# of TX	Azimuth (°)	BW (°)	Gain (dBd)	Total ERP (Watts)	Length (ft.)	Antenna Z Value (ft.) NWS*	Antenna Z Value (ft.) AGL**
1	AT&T	CCI	TPA65R-BU6D	Panel	700	40	4	0	64	11.35	2183.33	5.9	-6.0	195.0
1	AT&T	CCI	TPA65R-BU6D	Panel	850	40	1	0	66	12.05	641.30	5.9	-6.0	195.0
1	AT&T	CCI	TPA65R-BU6D	Panel	2100	40	4	0	60	15.85	6153.47	5.9	-6.0	195.0
1	AT&T	CCI	TPA65R-BU6D	Panel	2300	25	4	0	60	14.95	3126.08	5.9	-6.0	195.0
2	AT&T	CCI	DMP65R-BU6D	Panel	700	40	4	0	64	11.25	2133.63	5.9	-6.0	195.0
2	AT&T	CCI	DMP65R-BU6D	Panel	850	40	4	0	69	11.35	2183.33	5.9	-6.0	195.0
2	AT&T	CCI	DMP65R-BU6D	Panel	1900	40	4	0	70	11.35	2183.33	5.9	-6.0	195.0
3	AT&T	CCI	TPA65R-BU6D	Panel	700	40	4	170	64	11.35	2183.33	5.9	3.0	204.0
3	AT&T	CCI	TPA65R-BU6D	Panel	850	40	1	170	66	12.05	641.30	5.9	3.0	204.0
3	AT&T	CCI	TPA65R-BU6D	Panel	2100	40	4	170	60	15.85	6153.47	5.9	3.0	204.0
3	AT&T	CCI	TPA65R-BU6D	Panel	2300	25	4	170	60	14.95	3126.08	5.9	3.0	204.0
4	AT&T	CCI	DMP65R-BU6D	Panel	700	40	4	170	64	11.25	2133.63	5.9	3.0	204.0
4	AT&T	CCI	DMP65R-BU6D	Panel	850	40	4	170	69	11.35	2183.33	5.9	3.0	204.0
4	AT&T	CCI	DMP65R-BU6D	Panel	1900	40	4	170	70	11.35	2183.33	5.9	3.0	204.0
5	AT&T	CCI	TPA65R-BU6D	Panel	700	40	4	295	64	11.35	2183.33	5.9	9.0	210.0
5	AT&T	CCI	TPA65R-BU6D	Panel	850	40	1	295	66	12.05	641.30	5.9	9.0	210.0
5	AT&T	CCI	TPA65R-BU6D	Panel	2100	40	4	295	60	15.85	6153.47	5.9	9.0	210.0
5	AT&T	CCI	TPA65R-BU6D	Panel	2300	25	4	295	60	14.95	3126.08	5.9	9.0	210.0
6	AT&T	CCI	DMP65R-BU6D	Panel	700	40	4	295	64	11.25	2133.63	5.9	9.0	210.0
6	AT&T	CCI	DMP65R-BU6D	Panel	850	40	4	295	69	11.35	2183.33	5.9	9.0	210.0
6	AT&T	CCI	DMP65R-BU6D	Panel	1900	40	4	295	70	11.35	2183.33	5.9	9.0	210.0
7	Sprint	GENERIC	PANEL 6FT	Panel	862	40	2	3	66	12.62	1462.48	6.0	2.9	203.9
7	Sprint	GENERIC	PANEL 6FT	Panel	1900	60	2	3	66	15.84	4604.49	6.0	2.9	203.9
8	Sprint	GENERIC	PANEL 6FT	Panel	2500	35	1	3	60	14.49	984.17	6.0	2.9	203.9
9	Sprint	GENERIC	PANEL 6FT	Panel	862	40	2	93	66	12.62	1462.48	6.0	4.8	205.8

9	Sprint	GENERIC	PANEL 6FT	Panel	1900	60	2	93	66	15.84	4604.49	6.0	4.8	205.8
10	Sprint	GENERIC	PANEL 6FT	Panel	2500	35	1	93	60	14.49	984.17	6.0	4.8	205.8
11	Sprint	GENERIC	PANEL 6FT	Panel	862	40	2	253	66	12.62	1462.48	6.0	4.8	205.8
11	Sprint	GENERIC	PANEL 6FT	Panel	1900	60	2	253	66	15.84	4604.49	6.0	4.8	205.8
12	Sprint	GENERIC	PANEL 6FT	Panel	2500	35	1	253	60	14.49	984.17	6.0	4.8	205.8

*Table 1: Total Site Data Table (\*NWS = Nearest Walking Surface, \*\*AGL = Above Ground Level)*

*Note: Z Value represents the bottom tip height of the antenna*

#### 4.0 PREDICTED EMISSION LEVELS AND DISCUSSION

All calculations performed based upon the data listed for this facility have produced results that are within allowable limits for General Population limits for exposure to RF emissions as specified by federal standards.

AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document states that microwave dishes are compliant if they are mounted 20 feet or greater above any accessible walking or working surface.

Maximum Predicted MPE Level on Site:	% of MPE Limit:	Location:
Accessible <b>General Population</b> MPE Limits:	<b>98.20%</b>	<b>Sector C</b>
Accessible <b>Occupational</b> MPE Limits:	<b>19.64%</b>	

Ground Level Assessment:	% of MPE Limit:
Ground Level <b>General Population</b> MPE Limits:	<b>0.04%</b>
Ground Level <b>Occupational</b> MPE Limits:	<b>0.01%</b>

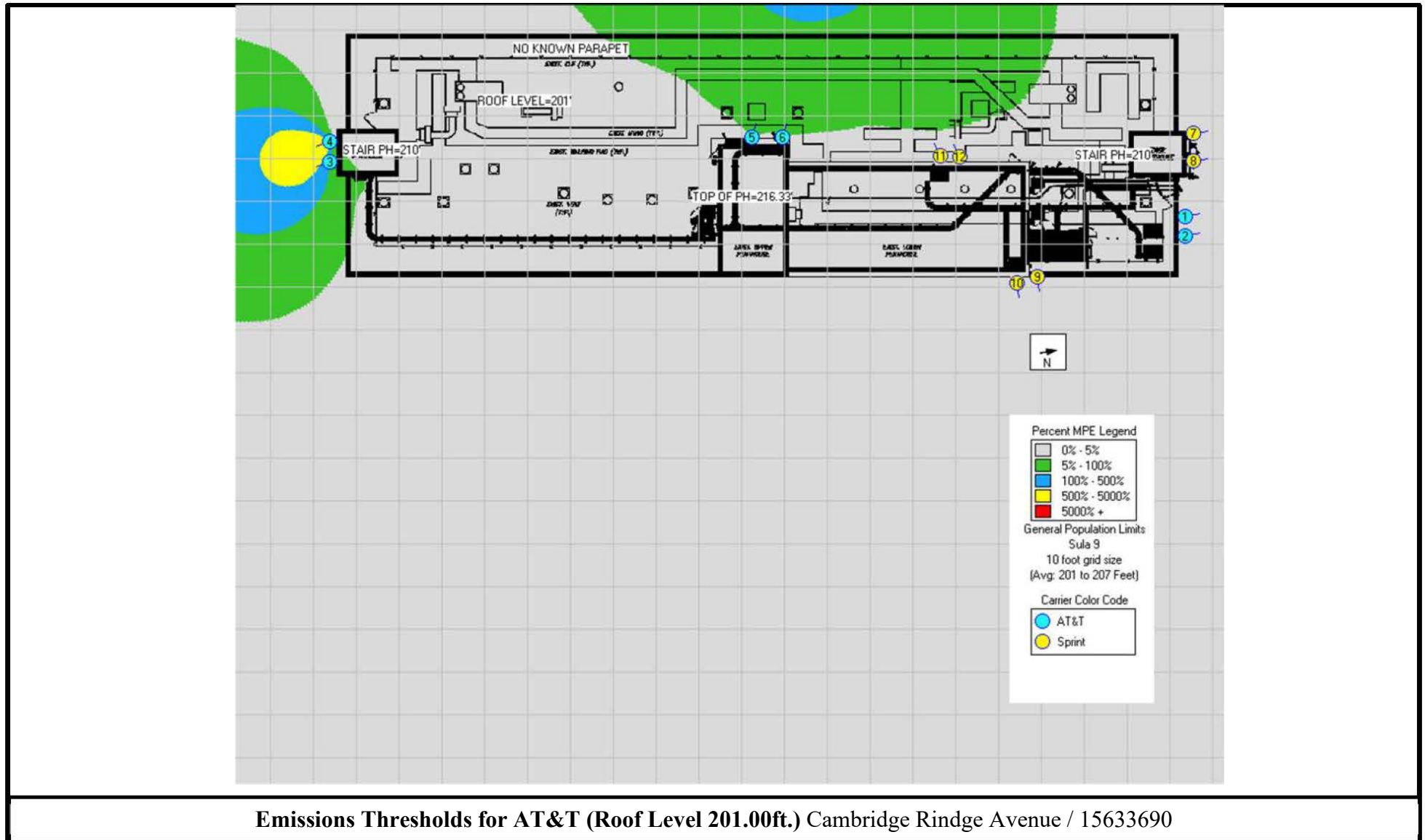
Sector A: Transmitting over Main Rooftop	% of MPE Limit:	*Distance from Antenna:
Accessible <b>General Population</b> MPE Limits:	<b>0.33%</b>	<b>0</b>
Accessible <b>Occupational</b> MPE Limits:	<b>0.07%</b>	<b>0</b>

Sector B: Transmitting over Main Rooftop	% of MPE Limit:	*Distance from Antenna:
Accessible <b>General Population</b> MPE Limits:	<b>4.50%</b>	<b>0</b>
Accessible <b>Occupational</b> MPE Limits:	<b>0.90%</b>	<b>0</b>

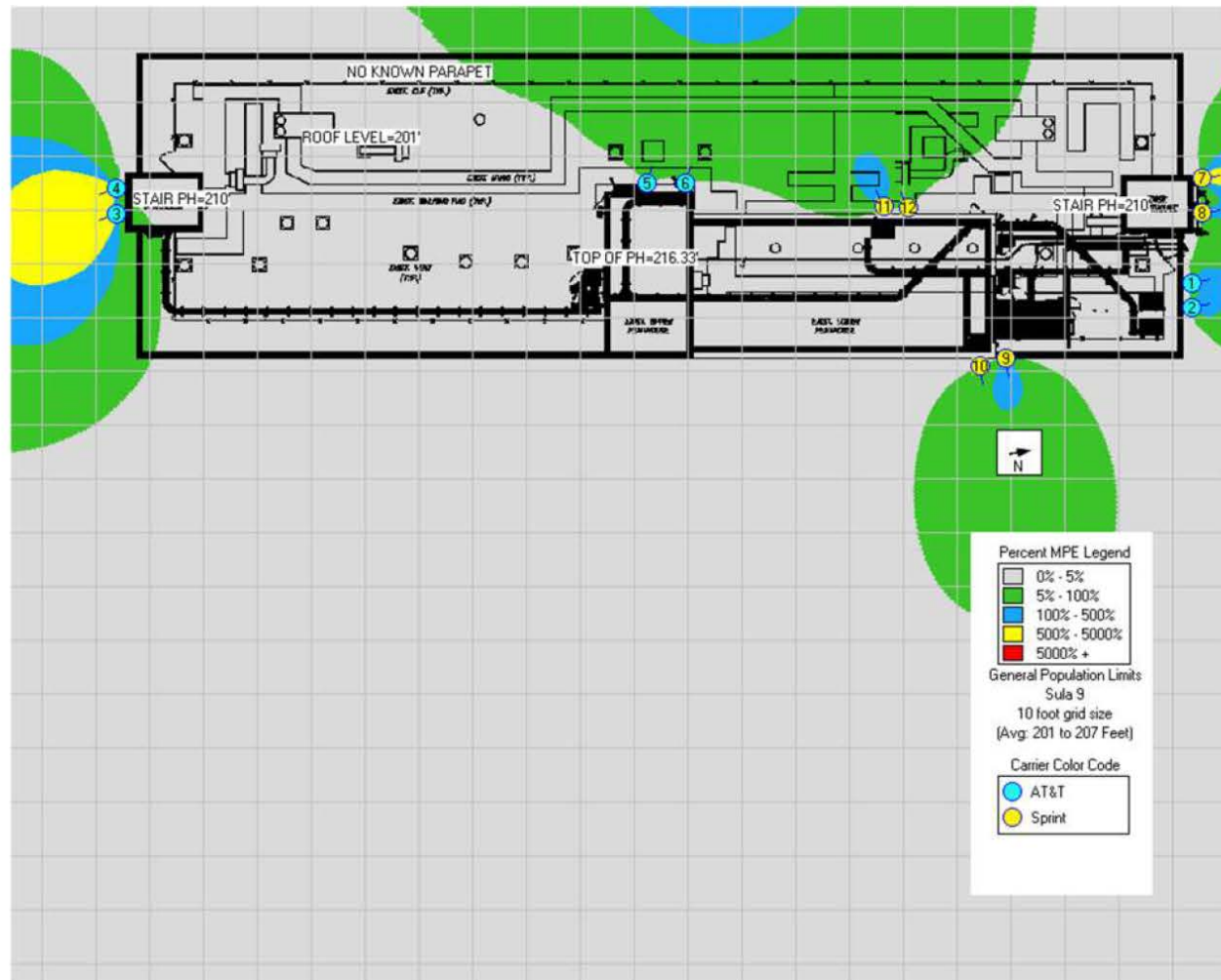
Sector C: Transmitting over Main Rooftop	% of MPE Limit:	*Distance from Antenna:
Accessible <b>General Population</b> MPE Limits:	<b>98.20%</b>	<b>0</b>
Accessible <b>Occupational</b> MPE Limits:	<b>19.64%</b>	<b>0</b>

*\*Distance from Antenna is the distance that the MPE limits are exceeded from the front face of the antenna, outward across an accessible area.*

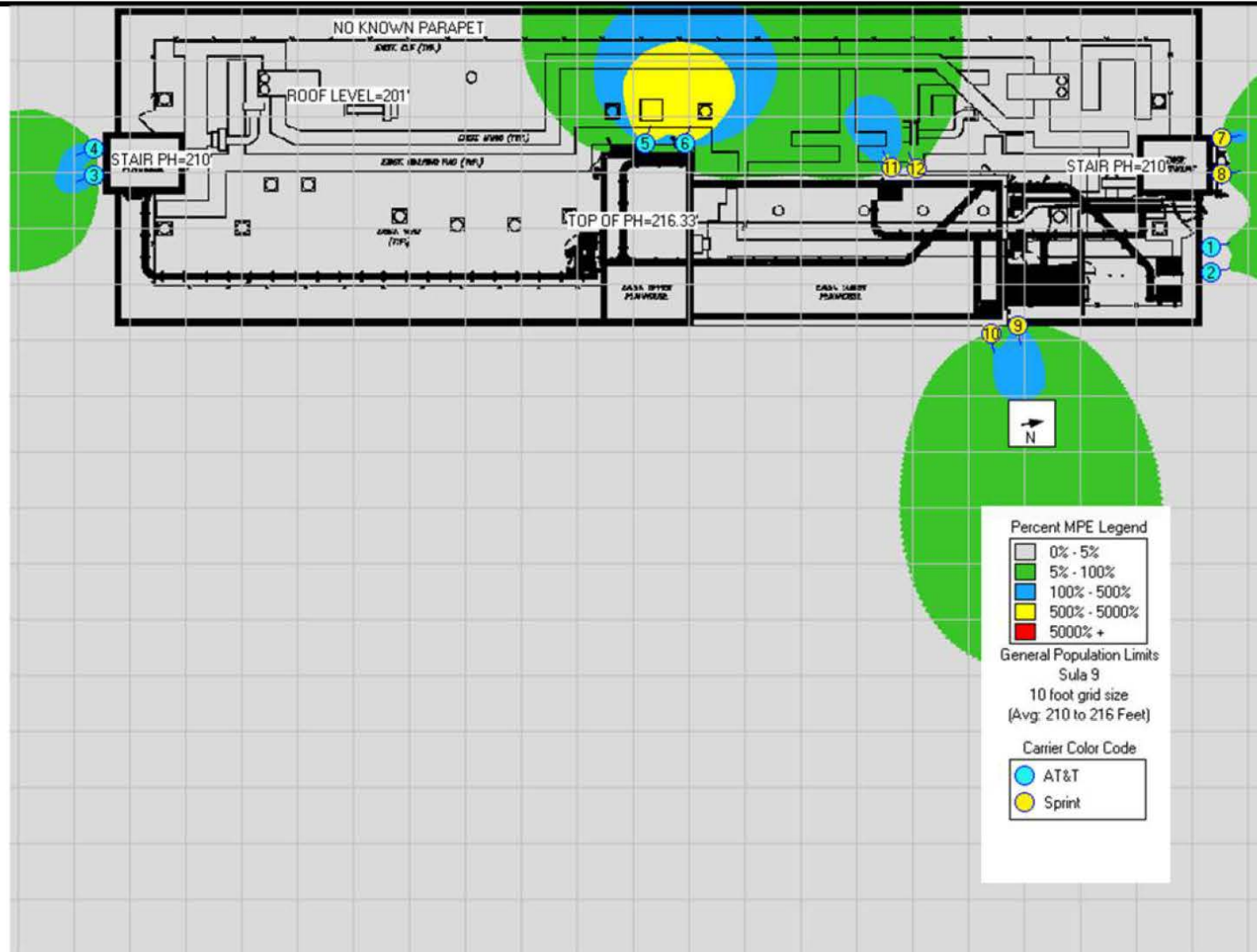
## 5.0 EMISSIONS DIAGRAMS



**Emissions Thresholds for AT&T (Roof Level 201.00ft.) Cambridge Rindge Avenue / 15633690**

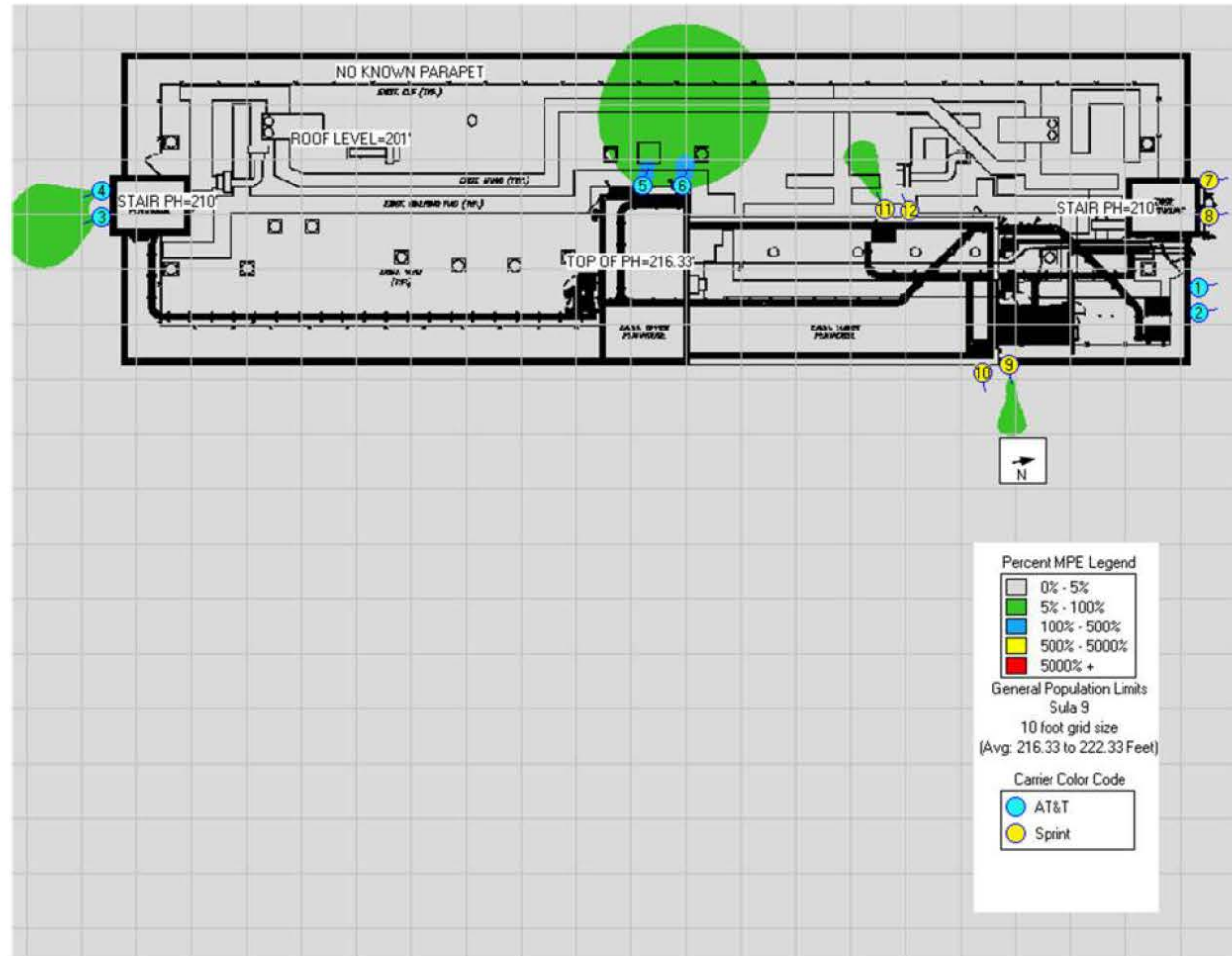


**Emissions Thresholds for All Carriers (Roof Level 201.00ft.) Cambridge Rindge Avenue / 15633690**



**Emissions Thresholds for All Carriers (Stair PH 210.00ft.) Cambridge Rindge Avenue / 15633690**





**Emissions Thresholds for All Carriers (Gamma PH 216.33ft.) Cambridge Rindge Avenue / 15633690**

## 6.0 STATEMENT OF COMPLIANCE

Centerline conducted worst case modeling to determine whether the rooftop facility located at 402 Rindge Avenue in Cambridge, Massachusetts is in compliance with FCC Regulations.

## 6.1 STATEMENT OF AT&T MOBILITY COMPLIANCE

Based on the information analyzed, AT&T is in compliance with FCC Regulations. No additional action is required by AT&T.

## 6.2 RECOMMENDATIONS

Existing Signage and Barriers (AT&T Sectors)										
Location	Information	Notice	Notice 2	Caution	Caution 2	Caution 2B	Caution 2C	Warning	Warning 2	Barriers
Alpha	0	0	0	0	0	0	0	0	0	0
Beta	0	0	0	0	0	0	0	0	0	0
Gamma	0	0	0	0	0	0	0	0	0	0

Recommended Signage and Barriers (AT&T Sectors) – Actions that MUST be Taken						
Location	Notice 2	Caution 2	Caution 2B	Caution 2C	Warning 2	Barriers
Alpha	0	0	0	2	0	0
Beta	0	0	0	0	0	0
Gamma	2	0	0	0	0	0

Final Compliant Configuration (AT&T Sectors) – All Mitigation Items that MUST be in Place										
Location	Information	Notice	Notice 2	Caution	Caution 2	Caution 2B	Caution 2C	Warning	Warning 2	Barriers
Alpha	0	0	0	0	0	0	2	0	0	0
Beta	0	0	0	0	0	0	0	0	0	0
Gamma	0	0	2	0	0	0	0	0	0	0

### AT&T Policy Items:




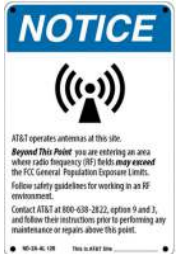




#### Alpha:

- Install (2) Caution 2C signs behind the antennas at Alpha.
- Install (2) Notice 2 signs below Gamma sector.

## **7.0 FALL ARREST AND PARAPET INFORMATION**

As per AT&T barrier policy, rooftop edges that are protected with a 39-inch parapet wall or guardrail are safe for work activity within six (6) feet of the edge. OSHA has stated that an existing 39-inch guardrail or parapet provides sufficient protection for employees. The height of the top rail or equivalent component of guardrail systems in new construction shall be at least 42 inches above the walking or working surface. It should also be noted that the height of the parapet or guardrail may be reduced to no less than 30 inches at any point provided the sum of the depth (horizontal distance) of the top edge, and the height of the top edge (vertical distance from the work surface to the top edge of the top member, is at least 48 inches. If there is no reason for working atop the roof, then edge protection is not required. In addition, workers may use personnel lifts or temporary fall protection measures to perform work within 6 feet of the roof edge in place of permanent edge protection. Reference: 29 CFR 1910.28, 29 CFR 1910.23 (NPRM-1990); OSHA Letters of Interpretation 2/9/83 and 3/8/9

**APPENDIX A: RF SIGNAGE****AT&T RF Signage**

<b>Sign</b>	<b>Description</b>	<b>Sign</b>	<b>Description</b>
	<b>Information 1 Sign</b> Gives guidelines on how to proceed and who to contact regarding areas that may exceed either the FCC's General Population or Occupational emissions limits.		<b>Caution 2C Sign</b> Gives specific information on how to proceed and who to contact regarding antennas that are façade mounted, concealed or on stand-alone structures.
	<b>Blue Notice 1 Sign</b> Used to alert individuals that they are entering an area that may exceed the FCC's General Population emissions limit. Must be positioned such that persons approaching from any angle have ample warning to avoid the marked areas.		<b>Blue Notice 2 Sign</b> Used to alert individuals that they are entering an area that may exceed the FCC's General Population emissions limits. To be used on barriers or antenna sectors as a hybrid of the Information 1 and Blue Notice 1 signs.
	<b>Yellow Caution 1 Sign-Rooftop</b> Used to inform individuals that they are entering an area that may exceed the FCC's Occupational emissions limit. Must be positioned such that persons approaching from any angle have ample warning to avoid the marked areas.		<b>Yellow Caution 2 Sign-Rooftop</b> Used to alert individuals that they are entering an area that may exceed the FCC's Occupational emissions limit. To be used on barriers or antenna sectors as a hybrid of the Information 1 and Yellow Caution 1 signs.
	<b>Yellow Caution 2B Sign- Tower</b> Used to inform individuals that they are entering an area that may exceed the FCC's Occupational emissions limits. Must be placed at the base of the tower to warn tower climbers of potential for exposure.		<b>Warning 2 Sign</b> Used to inform individuals that they are entering an area that may exceed the FCC's Occupational emissions limit by a factor of 10 or greater. Must be positioned such that persons approaching from any angle have ample warning to avoid the marked areas.

## APPENDIX B: FCC GUIDELINES AND EMISSIONS THRESHOLD LIMITS

All power density values used in this report were analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The number of  $\mu\text{W}/\text{cm}^2$  calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General Population/Uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limit for the 700 and 800 MHz Bands is approximately 467  $\mu\text{W}/\text{cm}^2$  and 567  $\mu\text{W}/\text{cm}^2$  respectively, and the general population exposure limit for the 1900 MHz PCS and 2100 MHz AWS bands is 1000  $\mu\text{W}/\text{cm}^2$ . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure, have been properly trained in RF safety and can exercise control over their exposure. Occupational/Controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure, have been trained in RF safety and can exercise control over his or her exposure by leaving the area or by some other appropriate means. The Occupational/Controlled exposure limits all utilized frequency bands is five (5) times the FCC's General Public / Uncontrolled exposure limit.

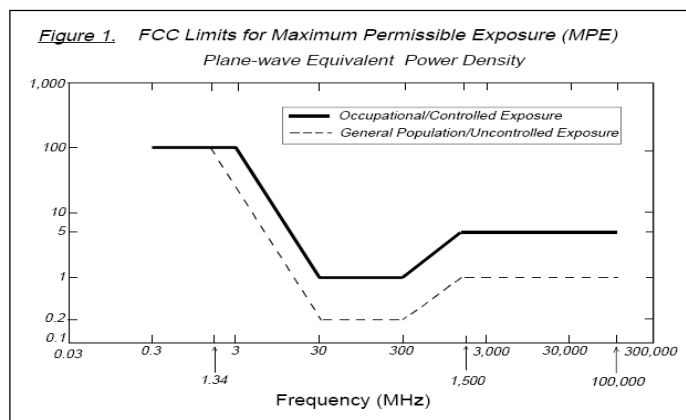
The FCC Mandates that if a site is found to be out of compliance with regard to emissions that any system operator contributing 5% or more to areas exceeding the FCC's allowable limits will be responsible for bringing the site into compliance.

Additional details can be found in FCC OET 65.

Table 1: Limits for Maximum Permissible Exposure (MPE)				
(A) Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6
(B) Limits for General Public/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time [E] <sup>2</sup> , [H] <sup>2</sup> , or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)

\* Plane-wave equivalent power density





## **APPENDIX C: CALCULATION METHODOLOGY**

Centerline Communications, LLC has performed theoretical modeling using Waterford Consultants' RoofMaster™ 2020 Version 22.12.31.2020 which uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations the power decreases inversely with the square of the distance. This modeling technique is accurate with low antenna centerlines, such as rooftops, where persons can get close to the antennas and pass through fields in close proximity.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. No losses were included in the power calculations unless they were specifically provided for the project.

## **APPENDIX D: CERTIFICATIONS**

I, Alex Van Abbema, preparer of this report certify that I am fully trained and aware of the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document.

Alex Van Abbema

6/23/2021

I, Brandon Green, reviewer and approver of this report certify that I am fully trained and aware of the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document.

Brandon Green

6/23/2021

## **APPENDIX E: PROPRIETARY STATEMENT**

This report was prepared for the use of AT&T Mobility, LLC to meet requirements specified in AT&T's corporate RF safety guidelines. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by Centerline Communications, LLC are based solely on the information provided by AT&T Mobility and all observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to Centerline Communications, LLC so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

## ULS License

**Upper Microwave Flexible Use Service License - WRFZ590 - FiberTower Spectrum Holdings LLC**

<b>Call Sign</b>	WRFZ590	<b>Radio Service</b>	UU - Upper Microwave Flexible Use Service
<b>Status</b>	Active	<b>Auth Type</b>	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?		No	

**Reserved Spectrum**  
Reserved Spectrum

**Market**

**Market** PEA007 - Boston, MA  
**Submarket** 0

**Channel Block** N11  
**Associated Frequencies (MHz)** 039600.00000000-039700.00000000

**Dates**

**Grant** 06/04/2020  
**Effective** 06/04/2020

**Expiration** 06/04/2030  
**Cancellation**

**Buildout Deadlines**

1st

2nd

**Discontinuance Dates**

1st

2nd

**Notification Dates**

1st

2nd

**Licensee**

**FRN** 0019211895

**Type** Limited Liability Company

**Licensee**

FiberTower Spectrum Holdings LLC  
208 S. Akard St., RM 1015  
Dallas, TX 75202  
ATTN Cecil J. Mathew

P:(855)699-7073  
F:(214)746-6410  
E:FCCMW@att.com

**Contact**

FiberTower Spectrum Holdings LLC  
  
208 S. Akard St., RM1015  
Dallas, TX 75202  
ATTN Cecil J. Mathew

P:(855)699-7073  
F:(214)746-6410  
E:FCCMW@att.com

**Ownership and Qualifications**

<b>Radio Service Type</b>	Fixed, Mobile		
<b>Regulatory Status</b>	Common Carrier, Non-Common Carrier, Private Comm	Interconnected	Yes

**Allen Ownership**

The Applicant answered "No" to each of the Allen Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics****Race**

Ethnicity

Gender

## ULS License

**Upper Microwave Flexible Use Service License - WRFZ591 - FiberTower Spectrum Holdings LLC**

Call Sign	WRFZ591	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?		No	

**Reserved Spectrum**  
 Reserved Spectrum
**Market**

Market	PEA007 - Boston, MA
Submarket	0

Channel Block	N12
Associated Frequencies (MHz)	039700.00000000-039800.00000000

**Dates**

Grant	06/04/2020
Effective	06/04/2020

Expiration	06/04/2030
Cancellation	

**Buildout Deadlines**

1st

2nd

**Discontinuance Dates**

1st

2nd

**Notification Dates**

1st

2nd

**Licensee**

FRN	0019211895
-----	------------

Type	Limited Liability Company
------	---------------------------

**Licensee**

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 F:(214)746-6410  
 E:FCCMW@att.com

**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier, Private Comm	Interconnected	Yes

**Allen Ownership**

The Applicant answered "No" to each of the Allen Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

## ULS License

**Upper Microwave Flexible Use Service License - WRFZ592 - FiberTower Spectrum Holdings LLC**

<b>Call Sign</b>	WRFZ592	<b>Radio Service</b>	UU - Upper Microwave Flexible Use Service
<b>Status</b>	Active	<b>Auth Type</b>	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?		No	

**Reserved Spectrum**  
 Reserved Spectrum
**Market**

<b>Market</b>	PEA007 - Boston, MA
<b>Submarket</b>	0

<b>Channel Block</b>	N13
<b>Associated Frequencies (MHz)</b>	039800.00000000-039900.00000000

**Dates**

<b>Grant</b>	06/04/2020
<b>Effective</b>	06/04/2020

<b>Expiration</b>	06/04/2030
<b>Cancellation</b>	

**Buildout Deadlines**

1st

2nd

**Discontinuance Dates**

1st

2nd

**Notification Dates**

1st

2nd

**Licensee**

<b>FRN</b>	0019211895
------------	------------

<b>Type</b>	Limited Liability Company
-------------	---------------------------

**Licensee**

FiberTower Spectrum Holdings LLC  
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 Dallas, TX 75202  
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**Contact**

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P:(855)699-7073  
 F:(214)746-6410  
 E:FCCMW@att.com

**Ownership and Qualifications**

<b>Radio Service Type</b>	Fixed, Mobile		
<b>Regulatory Status</b>	Common Carrier, Non-Common Carrier, Private Comm	Interconnected	Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics****Race**

Ethnicity

Gender



## ULS License

**Upper Microwave Flexible Use Service License - WRFZ593 - FiberTower Spectrum Holdings LLC**

<b>Call Sign</b>	WRFZ593	<b>Radio Service</b>	UU - Upper Microwave Flexible Use Service
<b>Status</b>	Active	<b>Auth Type</b>	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?		No	

**Reserved Spectrum**  
Reserved Spectrum

**Market**

**Market** PEA007 - Boston, MA  
**Submarket** 0

**Channel Block** N14  
**Associated Frequencies (MHz)** 039900.00000000-040000.00000000

**Dates**

**Grant** 06/04/2020  
**Effective** 06/04/2020

**Expiration** 06/04/2030  
**Cancellation**

**Buildout Deadlines**

1st

2nd

**Discontinuance Dates**

1st

2nd

**Notification Dates**

1st

2nd

**Licensee**

**FRN** 0019211895

**Type** Limited Liability Company

**Licensee**

FiberTower Spectrum Holdings LLC  
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Dallas, TX 75202  
ATTN Cecil J. Mathew

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**Contact**

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ATTN Cecil J. Mathew

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F:(214)746-6410  
E:FCCMW@att.com

**Ownership and Qualifications**

<b>Radio Service Type</b>	Fixed, Mobile		
<b>Regulatory Status</b>	Common Carrier, Non-Common Carrier, Private Comm	Interconnected	Yes

**Allen Ownership**

The Applicant answered "No" to each of the Allen Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics****Race**

Ethnicity

Gender

## ULS License

**Upper Microwave Flexible Use Service License - WRFZ594 - FiberTower Spectrum Holdings LLC**

Call Sign	WRFZ594	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?		No	

**Reserved Spectrum**  
 Reserved Spectrum
**Market**

Market	PEA007 - Boston, MA
Submarket	0

Channel Block	N7
Associated Frequencies (MHz)	039200.00000000-039300.00000000

**Dates**

Grant	06/04/2020
Effective	06/04/2020

Expiration	06/04/2030
Cancellation	

**Buildout Deadlines**

1st

2nd

**Discontinuance Dates**

1st

2nd

**Notification Dates**

1st

2nd

**Licensee**

FRN	0019211895
-----	------------

Type	Limited Liability Company
------	---------------------------

**Licensee**

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 208 S. Akard St., RM 1015  
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 E:FCCMW@att.com

**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier, Private Comm	Interconnected	Yes

**Allen Ownership**

The Applicant answered "No" to each of the Allen Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

## ULS License

**Upper Microwave Flexible Use Service License - WRFZ595 - FiberTower Spectrum Holdings LLC**

Call Sign	WRFZ595	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?		No	

**Reserved Spectrum**  
 Reserved Spectrum
**Market**

Market	PEA007 - Boston, MA
Submarket	0

Channel Block	N8
Associated Frequencies (MHz)	039300.00000000-039400.00000000

**Dates**

Grant	06/04/2020
Effective	06/04/2020

Expiration	06/04/2030
Cancellation	

**Buildout Deadlines**

1st

2nd

**Discontinuance Dates**

1st

2nd

**Notification Dates**

1st

2nd

**Licensee**

FRN	0019211895
-----	------------

Type	Limited Liability Company
------	---------------------------

**Licensee**

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 ATTN Cecil J. Mathew

P:(855)699-7073  
 F:(214)746-6410  
 E:FCCMW@att.com

**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier, Private Comm	Interconnected	Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

## ULS License

**Upper Microwave Flexible Use Service License - WRFZ596 - FiberTower Spectrum Holdings LLC**

Call Sign	WRFZ596	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?		No	

**Reserved Spectrum**  
 Reserved Spectrum
**Market**

Market	PEA007 - Boston, MA
Submarket	0

Channel Block	N9
Associated Frequencies (MHz)	039400.00000000-039500.00000000

**Dates**

Grant	06/04/2020
Effective	06/04/2020

Expiration	06/04/2030
Cancellation	

**Buildout Deadlines**

1st

2nd

**Discontinuance Dates**

1st

2nd

**Notification Dates**

1st

2nd

**Licensee**

FRN	0019211895
-----	------------

Type	Limited Liability Company
------	---------------------------

**Licensee**

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P:(855)699-7073  
 F:(214)746-6410  
 E:FCCMW@att.com

**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier, Private Comm	Interconnected	Yes

**Allen Ownership**

The Applicant answered "No" to each of the Allen Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

**REFERENCE COPY**

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

**LICENSEE:** AT&T MOBILITY SPECTRUM LLC

ATTN: CECIL J MATHEW  
AT&T MOBILITY SPECTRUM LLC  
208 S. AKARD ST., RM 1015  
DALLAS, TX 75202

<b>Call Sign</b> KNKA226	<b>File Number</b>
<b>Radio Service</b> CL - Cellular	
<b>Market Numer</b> CMA006	<b>Channel Block</b> A
<b>Sub-Market Designator</b> 0	

**FCC Registration Number (FRN):** 0014980726

<b>Market Name</b> Boston-Lowell-Brockton-Lawrenc
--

<b>Grant Date</b> 09-09-2014	<b>Effective Date</b> 08-29-2018	<b>Expiration Date</b> 10-01-2024	<b>Five Yr Build-Out Date</b>	<b>Print Date</b>
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**Site Information:**

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
15	42-37-42.3 N	070-39-16.8 W	45.7	58.8	

**Address:** 40 DORY ROAD

**City:** GLOUCESTER **County:** ESSEX **State:** MA **Construction Deadline:**

**Antenna: 1**

**Maximum Transmitting ERP in Watts:** 140.820

Azimuth(from true north)	<b>0</b>	<b>45</b>	<b>90</b>	<b>135</b>	<b>180</b>	<b>225</b>	<b>270</b>	<b>315</b>
<b>Antenna Height AAT (meters)</b>	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
<b>Transmitting ERP (watts)</b>	158.853	205.617	68.628	9.427	0.642	0.431	2.268	29.488

**Antenna: 2**

**Maximum Transmitting ERP in Watts:** 140.820

Azimuth(from true north)	<b>0</b>	<b>45</b>	<b>90</b>	<b>135</b>	<b>180</b>	<b>225</b>	<b>270</b>	<b>315</b>
<b>Antenna Height AAT (meters)</b>	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
<b>Transmitting ERP (watts)</b>	0.459	5.462	56.429	198.529	168.403	38.276	3.953	0.786

**Antenna: 3**

**Maximum Transmitting ERP in Watts:** 140.820

Azimuth(from true north)	<b>0</b>	<b>45</b>	<b>90</b>	<b>135</b>	<b>180</b>	<b>225</b>	<b>270</b>	<b>315</b>
<b>Antenna Height AAT (meters)</b>	93.100	97.500	101.800	101.800	100.800	88.700	85.700	101.800
<b>Transmitting ERP (watts)</b>	12.078	0.668	0.599	1.024	10.050	68.014	123.413	62.132

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: AT&T MOBILITY SPECTRUM LLC

Call Sign: KNKA226

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
20	43-03-11.8 N	071-16-02.1 W	179.2	59.4	

Address: 80 Diamond Hill Road

City: Candia County: ROCKINGHAM State: NH Construction Deadline:

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	52.325	70.778	16.988	1.425	0.187	0.144	0.491	7.084

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	0.343	3.851	33.085	100.313	84.855	19.494	2.061	0.299

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	73.200	111.000	159.400	159.000	98.400	148.300	88.600	75.600
Transmitting ERP (watts)	6.845	0.890	0.107	1.038	6.652	7.633	3.304	6.905

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
24	42-54-55.1 N	071-21-37.4 W	100.9	46.3	1011624

Address: 15 INDEPENDENCE DRIVE

City: LONDONDERRY County: ROCKINGHAM State: NH Construction Deadline:

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	161.221	224.756	47.602	3.692	0.510	0.437	1.233	19.454

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	0.510	3.172	43.604	213.248	156.639	22.374	1.350	0.496

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	35.900	30.000	44.800	52.100	54.500	72.000	68.000	66.500
Transmitting ERP (watts)	11.168	0.691	0.533	0.586	7.854	87.092	266.329	94.294

Licensee Name: AT&T MOBILITY SPECTRUM LLC

Call Sign: KNKA226

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
25	42-00-32.6 N	071-19-15.2 W	90.5	51.8	

Address: 75 WASHINGTON SST

City: PLAINVILLE County: NORFOLK State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	84.752	97.052	31.772	5.158	0.550	0.224	2.803	20.645

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	0.380	5.181	37.013	100.829	79.042	20.699	2.118	0.824

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	64.500	61.200	95.600	96.100	94.300	64.100	46.000	48.800
Transmitting ERP (watts)	24.577	1.736	0.715	2.292	18.444	139.378	281.180	142.336

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
26	41-46-57.1 N	070-44-06.5 W	12.5	58.8	

Address: KENDRICK ROAD

City: WAREHAM County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	186.898	242.551	75.777	10.617	0.738	0.508	2.730	35.860

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	0.361	5.818	47.861	150.309	121.062	28.493	2.933	0.991

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	46.500	56.700	59.800	50.600	39.100	32.800
Transmitting ERP (watts)	18.390	1.111	0.538	1.628	13.482	98.897	203.625	103.938



Licensee Name: AT&T MOBILITY SPECTRUM LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
27	41-53-35.2 N	070-56-35.0 W	17.7	106.1	1210211

Address: 326 W GROVE ST

City: Middleboro County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	125.283	153.432	54.208	6.550	0.674	0.363	2.675	27.340

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	0.351	5.901	52.455	151.828	120.612	27.887	2.679	0.991

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	47.500	46.300	30.000	37.000	40.900	39.500	51.600	42.300
Transmitting ERP (watts)	14.428	1.006	0.875	1.215	13.317	87.541	159.641	85.795

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
28	42-14-21.9 N	070-51-09.3 W	54.9	55.8	

Address: 168 Turkey Hill Lane

City: Cohasset County: NORFOLK State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	185.522	243.217	80.727	11.598	0.756	0.499	2.589	34.953

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	0.521	6.371	65.693	238.024	196.107	43.191	4.256	0.906

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	99.800	98.300	97.600	71.700	64.800	62.900	86.700	99.100
Transmitting ERP (watts)	9.488	0.543	0.538	1.234	8.977	53.553	85.290	45.661

Licensee Name: AT&T MOBILITY SPECTRUM LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	41-56-02.0 N	070-35-08.0 W	82.9	128.0	1007828

Address: 265 STATE ROAD

City: PLYMOUTH County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	23.222	24.154	10.475	1.931	0.466	0.109	1.398	6.965

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	0.346	4.427	33.055	88.168	72.485	17.790	1.831	0.701

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	128.000	128.000	128.000	123.500	92.200	86.600	84.900	120.500
Transmitting ERP (watts)	9.680	0.561	0.550	1.216	9.292	54.685	90.439	45.409

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
30	42-12-47.6 N	071-32-33.4 W	128.0	58.5	

Address: 26 LUMBER STREET

City: HOPKINTON County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	158.662	188.312	64.228	8.830	0.704	0.395	4.080	30.535

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	0.432	6.612	61.028	195.296	166.263	35.500	3.748	0.703

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.900	93.200	99.800	91.500	55.300	59.600	35.700	76.400
Transmitting ERP (watts)	18.831	1.074	0.590	1.783	15.144	103.799	219.501	97.060

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
31	42-38-27.0 N	070-36-24.8 W	36.6	38.7	

Address: 38 Thatcher Rd

City: ROCKLAND County: ESSEX State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	170.519	227.554	76.127	10.393	0.706	0.470	2.520	32.796

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	0.462	5.689	58.840	206.264	174.760	39.385	4.197	0.837

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	69.500	69.500	69.500	69.500	69.500	66.700	58.400	60.100
Transmitting ERP (watts)	20.761	1.510	0.812	1.238	15.269	110.467	237.338	124.965

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
32	42-36-37.9 N	071-33-28.9 W	148.4	46.3	

Address: 142 LOWELL RD

City: GROTON County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	209.658	291.175	91.511	11.206	1.156	0.596	4.998	40.617

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	0.597	10.042	80.421	284.569	246.599	46.898	5.186	0.906

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	129.600	133.000	121.700	118.300	83.000	99.300	81.700	86.000
Transmitting ERP (watts)	18.748	1.375	0.781	1.196	15.487	106.791	230.014	118.184

Licensee Name: AT&T MOBILITY SPECTRUM LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
33	42-08-01.1 N	070-43-57.5 W	68.3	80.5	1017973

Address: 178 EAMES WAY

City: Marshfield County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	156.993	202.510	73.503	10.210	0.666	0.415	2.429	32.615

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	0.482	5.988	62.083	217.536	187.313	40.576	4.382	0.869

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	125.300	128.600	128.200	125.800	107.800	113.100	97.600	105.400
Transmitting ERP (watts)	21.007	1.466	0.829	1.219	15.907	109.305	228.002	122.541

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
34	41-42-11.1 N	070-46-47.1 W	14.3	59.4	

Address: 55 BENSONBROOK ROAD

City: MARION County: PLYMOUTH State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	161.079	196.082	67.519	9.213	0.702	0.419	4.077	32.479

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	0.446	6.712	62.074	197.767	163.770	38.273	3.886	0.801

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	51.300	62.700	66.200	68.700	66.600	60.600	47.100	51.900
Transmitting ERP (watts)	3.819	0.784	0.433	6.729	64.256	202.261	164.916	37.606

Licensee Name: AT&T MOBILITY SPECTRUM LLC

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
35	42-21-20.1 N	071-33-16.6 W	156.1	26.5	

Address: 157 UNION STREET

City: MARLBOROUGH County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	280.304	377.489	119.970	14.810	1.525	0.802	6.660	52.209

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	0.801	13.105	105.660	375.949	325.389	63.339	6.978	1.142

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	97.800	119.900	113.500	108.400	76.200	73.000	51.900	77.300
Transmitting ERP (watts)	30.606	2.831	1.046	2.632	27.909	187.774	419.392	197.441

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
36	42-39-54.6 N	070-38-19.9 W	59.4	44.5	

Address: 68 JOHNSON ROAD

City: ROCKPORT County: ESSEX State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	126.741	159.124	54.189	7.443	0.564	0.334	3.098	25.685

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	0.353	5.360	49.103	157.255	130.117	30.639	2.895	0.641

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

	0	45	90	135	180	225	270	315
Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	103.000	103.000	103.000	100.400	95.400	85.100	98.100	103.000
Transmitting ERP (watts)	15.787	0.974	0.495	1.442	11.730	84.942	168.331	87.120

Licensee Name: AT&T MOBILITY SPECTRUM LLC

Call Sign: KNKA226

File Number:

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
37	42-41-29.8 N	071-47-30.8 W	233.8	47.9	

Address: 1140 Greenville Rd

City: ASHBY County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	138.200	163.500	145.000	68.800	30.000	30.000	30.000
Transmitting ERP (watts)	301.383	343.844	123.915	17.212	1.267	0.862	4.339	57.968

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	138.200	163.500	145.000	68.800	30.000	30.000	30.000
Transmitting ERP (watts)	0.559	6.546	72.077	254.800	226.824	50.359	4.678	0.979

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	138.200	163.500	145.000	68.800	30.000	30.000	30.000
Transmitting ERP (watts)	35.557	2.084	1.375	2.194	29.159	209.483	410.600	215.057

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
38	42-38-54.9 N	071-47-40.6 W	240.8	47.2	

Address: 601-603 FITCHBURG STATE ROAD

City: ASHBY County: MIDDLESEX State: MA Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	31.100	159.800	170.800	147.700	56.300	30.000	30.000	30.000
Transmitting ERP (watts)	204.865	233.420	85.530	11.768	0.897	0.575	2.961	39.554

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	31.100	159.800	170.800	147.700	56.300	30.000	30.000	30.000
Transmitting ERP (watts)	0.570	6.676	74.271	261.076	238.587	50.169	4.787	1.001

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	31.100	159.800	170.800	147.700	56.300	30.000	30.000	30.000
Transmitting ERP (watts)	24.123	1.410	0.948	1.499	20.272	140.599	280.157	146.756

Licensee Name: AT&T MOBILITY SPECTRUM LLC

Call Sign: KNKA226

File Number:

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Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
40	43-05-58.2 N	070-47-28.6 W	7.6	67.4	

Address: 165 GOSLING RD

City: NEWINGTON County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	205.727	278.300	62.928	5.059	0.711	0.597	1.577	25.136

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	0.559	3.335	47.419	236.351	181.187	26.867	1.510	0.563

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	34.000	45.500	68.500	72.400	58.800	51.900	57.200	52.000
Transmitting ERP (watts)	10.525	0.618	0.497	0.555	7.391	82.592	243.998	90.540

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
41	43-04-39.1 N	071-07-30.3 W	107.0	60.7	1231475

Address: 150 Raymond Road

City: Nottingham County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	160.334	230.049	54.265	4.271	0.586	0.522	1.415	21.993

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	0.493	3.289	48.427	238.724	177.920	27.618	1.619	0.581

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	54.900	95.800	122.100	119.300	102.200	66.300	44.100	30.000
Transmitting ERP (watts)	10.353	0.693	0.601	0.662	8.753	100.864	305.315	110.743

Licensee Name: AT&T MOBILITY SPECTRUM LLC

Call Sign: KNKA226

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
42	43-13-24.3 N	071-14-23.2 W	189.0	38.7	

Address: 50 OLD CANTERBURY RD

City: NORTHWOOD County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	114.248	162.456	37.049	2.808	0.392	0.366	0.961	16.015

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	0.544	3.573	49.915	233.638	184.420	30.453	1.413	0.618

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	30.000	30.000	43.800	80.800	68.900	30.000	53.500	30.000
Transmitting ERP (watts)	8.132	0.494	0.387	0.467	6.390	72.302	182.164	77.916

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
43	42-59-40.7 N	070-46-58.5 W	12.5	59.4	

Address: 96 GROVE RD

City: RYE County: ROCKINGHAM State: NH Construction Deadline: 03-29-2013

**Antenna: 1**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	146.515	206.846	49.164	3.766	0.505	0.452	1.193	17.877

**Antenna: 2**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	0.464	2.913	42.460	206.462	152.606	24.148	1.373	0.460

**Antenna: 3**

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	49.700	62.100	64.000	64.300	63.700	45.100	38.900	54.200
Transmitting ERP (watts)	10.168	0.644	0.536	0.576	7.457	86.483	257.603	87.494

**Control Points:**

**Control Pt. No. 2**

Address: 100 LOWDER BROOK DR

City: WESTWOOD County: NORFOLK State: MA Telephone Number: (617)462-7094



**Licensee Name:** AT&T MOBILITY SPECTRUM LLC

**Call Sign:** KNKA226

**File Number:**

**Print Date:**

**Waivers/Conditions:**

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

Commission approval of this application and the licenses contained therein are subject to the conditions set forth in the Memorandum Opinion and Order, adopted on December 29, 2006 and released on March 26, 2007, and revised in the Order on Reconsideration, adopted and released on March 26, 2007. See AT&T Inc. and BellSouth Corporation Application for Transfer of Control, WC Docket No. 06-74, Memorandum Opinion and Order, FCC 06-189 (rel. Mar. 26, 2007); AT&T Inc. and BellSouth Corporation, WC Docket No. 06-74, Order on Reconsideration, FCC 07-44 (rel. Mar. 26, 2007).

## ULS License

**PCS Broadband License - KNLF216 - New Cingular Wireless PCS, LLC**

Call Sign	KNLF216	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	MTA008 - Boston-Providence	Channel Block	A
Submarket	27	Associated Frequencies (MHz)	001850.00000000- 001865.00000000 001930.00000000- 001945.00000000

3.7 GHz License Type

3.7 GHz Linked License

**Dates**

Grant	06/02/2015	Expiration	06/23/2025
Effective	08/31/2018	Cancellation	

**Buildout Deadlines**

1st	06/23/2000	2nd	06/23/2005
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**Discontinuance Dates**

1st		2nd	
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**Notification Dates**

1st	06/28/2000	2nd	03/08/2005
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**Licensee**

FRN	0003291192	Type	Limited Liability Company
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**Licensee**

New Cingular Wireless PCS, LLC 208 S Akard St., RM 1016 Dallas, TX 75202 ATTN Leslie Wilson	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
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**Contact**

AT&T Mobility LLC Cecil J Mathew 208 S Akard St., RM 1015 Dallas, TX 75202 ATTN FCC GROUP	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
---	---

**Ownership and Qualifications**

Radio Service Type    Mobile

Regulatory Status    Common Carrier    Interconnected    Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

**REFERENCE COPY**

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# Federal Communications Commission

## Wireless Telecommunications Bureau

### RADIO STATION AUTHORIZATION

LICENSEE: AT&T MOBILITY SPECTRUM LLC

ATTN: CECIL J MATHEW  
AT&T MOBILITY SPECTRUM LLC  
208 S. AKARD ST., RM 1015  
DALLAS, TX 75202

<b>Call Sign</b> KNLF954	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0014980726

<b>Grant Date</b> 06-29-2017	<b>Effective Date</b> 09-21-2018	<b>Expiration Date</b> 06-27-2027	<b>Print Date</b>
<b>Market Number</b> BTA051	<b>Channel Block</b> D	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Boston, MA			
<b>1st Build-out Date</b> 06-27-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

#### Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

#### Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Licensee Name:** AT&T MOBILITY SPECTRUM LLC

**Call Sign:** KNLF954

**File Number:**

**Print Date:**

This authorization is subject to the condition that the remaining balance of the winning bid amount will be paid in accordance with Part 1 of the Commission's rules, 47 C.F.R. Part 1.

Preferred Copy

**Licensee Name:** AT&T MOBILITY SPECTRUM LLC

**Call Sign:** KNLF954

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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## ULS License

**AWS-3 (1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz) License - WQVN675 - AT&T Wireless Services 3 LLC**

Call Sign	WQVN675	Radio Service	AT - AWS-3 (1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz)
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?			

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	BEA003 - Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-RI-VT	Channel Block	J
Submarket	0	Associated Frequencies (MHz)	001770.00000000-001780.00000000 002170.00000000-002180.00000000

**Dates**

Grant	04/08/2015	Expiration	04/08/2027
Effective	08/29/2018	Cancellation	

**Buildout Deadlines**

1st	04/08/2021	2nd	04/08/2027
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**Discontinuance Dates**

1st	2nd
-----	-----

**Notification Dates**

1st	2nd
-----	-----

**Licensee**

FRN	0023910920	Type	Limited Liability Company
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**Licenses**

AT&T Wireless Services 3 LLC 208 S. Akard St., RM 1015 Dallas, TX 75202 ATTN Cecil J Mathew	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
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**Contact**

AT&T MOBILITY LLC Cecil J Mathew 208 S Akard St., RM 1015 Dallas, TX 75202 ATTN Michael P. Goggin	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
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**Ownership and Qualifications**

Radio Service Type	Mobile
Regulatory Status	Common Carrier, Non-Common Carrier Interconnected Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race		Gender	
Ethnicity			

## ULS License

**700 MHz Public Safety Broadband Nationwide License License - WQQE234 - First Responder Network Authority**

Call Sign	WQQE234	Radio Service	SP - 700 MHz Public Safety Broadband Nationwide License
Status	Active	Auth Type	Regular
<b>Dates</b>			
Grant	11/15/2012	Expiration	11/15/2022
Effective	12/29/2017	Cancellation	

**Area of Operation: N**

Nationwide

**Frequency Bands**

000758.00000000-000769.00000000  
000788.00000000-000799.00000000

**Licensee**

FRN	0025487950	Type	Other - Independent Authority
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**Licensee**

First Responder Network Authority  
12201 Sunrise Valley Drive  
Reston, VA 20192  
ATTN Uzoma Onyeije

P:(571)665-6142  
E:Uzoma.Onyeije@firstnet.gov

**Contact****Ownership and Qualifications**

Radio Service Type Mobile

Regulatory Status Interconnected

**Alien Ownership**

Is the applicant a foreign government or the representative of any foreign government?

Is the applicant an alien or the representative of an alien?

Is the applicant a corporation organized under the laws of any foreign government?

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?

The Alien Ruling question is not answered.

**Basic Qualifications**



Has the applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license or construction permit denied by the Commission?

Has the applicant or any party to this application, or any party directly or indirectly controlling the applicant, ever been convicted of a felony by any state or federal court?

Has any court finally adjudged the applicant or any party directly or indirectly controlling the applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition?

### Demographics

Race

Ethnicity

Gender

**REFERENCE COPY**

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# **Federal Communications Commission**

## **Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

**LICENSEE:** AT&T MOBILITY SPECTRUM LLC

ATTN: CECIL J MATHEW  
AT&T MOBILITY SPECTRUM LLC  
208 S. AKARD ST., RM 1015  
DALLAS, TX 75202

<b>Call Sign</b> WQJU427	<b>File Number</b>
<b>Radio Service</b> WY - 700 MHz Lower Band (Blocks A, B & E)	

**FCC Registration Number (FRN):** 0014980726

<b>Grant Date</b> 01-06-2009	<b>Effective Date</b> 08-29-2018	<b>Expiration Date</b> 06-13-2019	<b>Print Date</b>
<b>Market Number</b> CMA006	<b>Channel Block</b> B	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Boston-Lowell-Brockton-Lawrenc			
<b>1st Build-out Date</b> 12-13-2016	<b>2nd Build-out Date</b> 06-13-2019	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

**Waivers/Conditions:**

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This license is subject to compliance with the conditions set forth in the Commission's Order of Modification, WT Docket No. 12-69, DA 14-43, released January 16, 2014.

**Conditions:**

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Licensee Name:** AT&T MOBILITY SPECTRUM LLC

**Call Sign:** WQJU427

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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## ULS License

**700 MHz Lower Band (Blocks A, B & E) License - WQIZ616 - New Cingular Wireless PCS, LLC**

Call Sign	WQIZ616	Radio Service	WY - 700 MHz Lower Band (Blocks A, B & E)
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?			

**Reserved Spectrum**  
 Reserved Spectrum
**Market**

Market	BEA003 - Boston-Worcester-Lawrence-Lowell-Brockton, MA-NH-RI-VT	Channel Block	E
Submarket	0	Associated Frequencies (MHz)	000722.00000000-000728.00000000

**Dates**

Grant	06/26/2008	Expiration	03/07/2021
Effective	08/31/2018	Cancellation	

**Buildout Deadlines**

1st	03/07/2017	2nd	03/07/2021
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**Discontinuance Dates**

1st		2nd	
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**Notification Dates**

1st	03/16/2017	2nd	06/17/2020
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**Licenses**

FRN	0003291192	Type	Limited Liability Company
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**Licenses**

New Cingular Wireless PCS, LLC 208 S Akard St., RM 1016 Dallas, TX 75202 ATTN Leslie Wilson	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
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**Contact**

AT&T Mobility LLC Cecil J Mathew 208 S Akard St., RM 1015 Dallas, TX 75202 ATTN Michael P. Goggin	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
---	---

**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier	Interconnected	No

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race		Gender	
Ethnicity			

**REFERENCE COPY**

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# Federal Communications Commission

## Wireless Telecommunications Bureau

### RADIO STATION AUTHORIZATION

LICENSEE: AT&T MOBILITY SPECTRUM LLC

ATTN: CECIL J MATHEW  
AT&T MOBILITY SPECTRUM LLC  
208 S. AKARD ST., RM 1015  
DALLAS, TX 75202

<b>Call Sign</b> WPWU950	<b>File Number</b>
<b>Radio Service</b> WZ - 700 MHz Lower Band (Blocks C, D)	

FCC Registration Number (FRN): 0014980726

<b>Grant Date</b> 01-24-2003	<b>Effective Date</b> 08-29-2018	<b>Expiration Date</b> 06-13-2019	<b>Print Date</b>
<b>Market Number</b> CMA006	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Boston-Lowell-Brockton-Lawrenc			
<b>1st Build-out Date</b> 06-13-2019	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

#### Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

Operation of the facilities authorized herein, are subject to the condition that harmful interference may not be caused to, but must be accepted from UHF TV transmitters in Canada and Mexico as identified in existing and any future agreements with those countries.

#### Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Licensee Name:** AT&T MOBILITY SPECTRUM LLC

**Call Sign:** WPWU950

**File Number:**

**Print Date:**

This license is subject to compliance with the conditions set forth in the Commission's Order of Modification, WT Docket No. 12-69, DA 14-43, released January 16, 2014.

Reference Copy

**Licensee Name:** AT&T MOBILITY SPECTRUM LLC

**Call Sign:** WPWU950

**File Number:**

**Print Date:**

**700 MHz Relicensed Area Information:**

<b>Market</b>	<b>Market Name</b>	<b>Buildout Deadline</b>	<b>Buildout Notification</b>	<b>Status</b>
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## ULS License

**700 MHz Lower Band (Blocks C, D) License - WPZA235 - New Cingular Wireless PCS, LLC**

Call Sign	WPZA235	Radio Service	WZ - 700 MHz Lower Band (Blocks C, D)
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Status	Active	Auth Type	Regular
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**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	EAG701 - Northeast	Channel Block	D
Submarket	0	Associated Frequencies (MHz)	000716.00000000-000722.00000000

3.7 GHz License Type	3.7 GHz Linked License
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**Dates**

Grant	11/05/2019	Expiration	06/13/2029
Effective	11/05/2019	Cancellation	

**Buildout Deadlines**

1st	06/13/2019	2nd	
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**Discontinuance Dates**

1st		2nd	
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**Notification Dates**

1st	06/10/2019	2nd	06/10/2019
-----	------------	-----	------------

**Licensee**

FRN	0003291192	Type	Limited Liability Company
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**Licensee**

New Cingular Wireless PCS, LLC 208 S Akard St Dallas, TX 75202 ATTN Cecil J Mathew	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
---	---

**Contact**

AT&T Mobility LLC Cecil J Mathew 208 S Akard St Dallas, TX 75202 ATTN FCC GROUP	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
---	---



**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier	Interconnected	No

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race	
Ethnicity	Gender

## ULS License

**Wireless Communications Service License - KNLB297 - New Cingular Wireless PCS, LLC****PA This license has pending applications: 0009220775**

Call Sign	KNLB297	Radio Service	WS - Wireless Communications Service
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	REA001 - Northeast	Channel Block	D
Submarket	0	Associated Frequencies (MHz)	002345.00000000-002350.00000000
3.7 GHz License Type		3.7 GHz Linked License	

**Dates**

Grant	02/28/2020	Expiration	07/21/2027
Effective	02/28/2020	Cancellation	

**Buildout Deadlines**

1st	2nd	09/13/2021
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**Discontinuance Dates**

1st	2nd
-----	-----

**Notification Dates**

1st	2nd
-----	-----

**Licensee**

FRN	0003291192	Type	Limited Liability Company
-----	------------	------	---------------------------

**Licensee**

New Cingular Wireless PCS, LLC 208 S. Akard St., RM 1016 Dallas, TX 75202 ATTN Leslie A. Wilson	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
--	---

**Contact**

AT&T Mobility LLC  1120 20th Street, NW - Suite 1000 Washington, DC 20036 ATTN Michael P. Goggin	P:(202)457-2055 F:(202)457-3073 E:michael.p.goggin@att.com
--	--

**Ownership and Qualifications**

Radio Service Type    Fixed, Mobile

Regulatory Status	Common Carrier, Non-Common Carrier	Interconnected	Yes
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**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender

## ULS License

**Wireless Communications Service License - WPQL634 - New Cingular Wireless Services, Inc.****PA** This license has pending applications: 0009220802

Call Sign	WPQL634	Radio Service	WS - Wireless Communications Service
Status	Active	Auth Type	Regular

**Rural Service Provider Bidding Credit**

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

**Reserved Spectrum**

Reserved Spectrum

**Market**

Market	REA001 - Northeast	Channel Block	C
Submarket	7	Associated Frequencies (MHz)	002315.00000000-002320.00000000

**Dates**

Grant	02/04/2020	Expiration	07/21/2027
Effective	02/04/2020	Cancellation	

**Buildout Deadlines**

1st	2nd	09/13/2021
-----	-----	------------

**Discontinuance Dates**

1st	2nd
-----	-----

**Notification Dates**

1st	2nd
-----	-----

**Licensee**

FRN	0004122032	Type	Corporation
-----	------------	------	-------------

**Licensee**

New Cingular Wireless Services, Inc. 208 S. Akard St., RM 1016 Dallas, TX 75202 ATTN Leslie A. Wilson	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
--	---

**Contact**

AT&T Mobility LLC Michael Goggin 1120 20th Street, NW Washington, DC 20036 ATTN Michael P. Goggin	P:(202)457-2055 F:(202)457-3074 E:michael.p.goggin@cingular.com
---	---

**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile
Regulatory Status	Common Carrier Interconnected Yes

**Allen Ownership**

The Applicant answered "No" to each of the Allen Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race	
Ethnicity	Gender

## ULS License

**Wireless Communications Service License - KNLB210 - New Cingular Wireless PCS, LLC**

Call Sign	KNLB210	Radio Service	WS - Wireless Communications Service
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?			

**Reserved Spectrum**  
Reserved Spectrum

<b>Market</b>		<b>Channel Block</b>	A
Market	MEA001 - Boston	<b>Associated Frequencies (MHz)</b>	002305.00000000-002310.00000000
Submarket	0		002350.00000000-002355.00000000

**Dates**

Grant	02/07/2020	Expiration	07/21/2027
Effective	02/07/2020	Cancellation	

**Buildout Deadlines**

1st	03/13/2017	2nd	09/13/2019
-----	------------	-----	------------

**Discontinuance Dates**

1st		2nd	
-----	--	-----	--

**Notification Dates**

1st	03/03/2017	2nd	09/04/2019
-----	------------	-----	------------

**Licenses**

FRN	0003291192	Type	Limited Liability Company
-----	------------	------	---------------------------

**Licenses**

New Cingular Wireless PCS, LLC 208 S. Akard St., RM 1016 Dallas, TX 75202 ATTN Leslie A. Wilson	P:(855)699-7073 F:(214)746-6410 E:FCCMW@att.com
--	---

**Contact**

AT&T Mobility LLC  1120 20th Street, NW - Suite 1000 Washington, DC 20036 ATTN Michael P. Goggin	P:(202)457-2055 F:(202)457-3073 E:michael.p.goggin@att.com
--	--

**Ownership and Qualifications**

Radio Service Type	
Regulatory Status	Interconnected

**Allen Ownership**

The Applicant answered "No" to each of the Allen Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race		Gender	
Ethnicity			

## ULS License

**Wireless Communications Service License - KNLB200 - New Cingular Wireless PCS, LLC**

Call Sign	KNLB200	Radio Service	WS - Wireless Communications Service
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?			

**Reserved Spectrum**  
 Reserved Spectrum
**Market**

Market	MEA001 - Boston
Submarket	0

Channel Block	B
Associated Frequencies (MHz)	002310.00000000-002315.00000000 002355.00000000-002360.00000000

**Dates**

Grant	02/07/2020
Effective	02/07/2020

Expiration	07/21/2027
Cancellation	

**Buildout Deadlines**

1st	03/13/2017
-----	------------

2nd	09/13/2019
-----	------------

**Discontinuance Dates**

1st	
-----	--

2nd	
-----	--

**Notification Dates**

1st	03/03/2017
-----	------------

2nd	09/04/2019
-----	------------

**Licenses**

FRN	0003291192
-----	------------

Type	Limited Liability Company
------	---------------------------

**Licenses**

New Cingular Wireless PCS, LLC  
 208 S. Akard St., RM 1016  
 Dallas, TX 75202  
 ATTN Leslie A. Wilson

P:(855)699-7073  
 F:(214)746-6410  
 E:FCCMW@att.com

**Contact**

AT&T Mobility LLC

1120 20th Street, NW - Suite 1000  
 Washington, DC 20036  
 ATTN Michael P. Goggin

P:(202)457-2055  
 F:(202)457-3073  
 E:michael.p.goggin@att.com

**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier	Interconnected	Yes

**Alien Ownership**

The Applicant answered "No" to each of the Alien Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race		
Ethnicity		Gender

## ULS License

**Upper Microwave Flexible Use Service License - WRFZ589 - FiberTower Spectrum Holdings LLC**

Call Sign	WRFZ589	Radio Service	UU - Upper Microwave Flexible Use Service
Status	Active	Auth Type	Regular
<b>Rural Service Provider Bidding Credit</b>			
Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?		No	

**Reserved Spectrum**  
 Reserved Spectrum
**Market**

Market	PEA007 - Boston, MA
Submarket	0

Channel Block	N10
Associated Frequencies (MHz)	039500.00000000-039600.00000000

**Dates**

Grant	06/04/2020
Effective	06/04/2020

Expiration	06/04/2030
Cancellation	

**Buildout Deadlines**

1st

2nd

**Discontinuance Dates**

1st

2nd

**Notification Dates**

1st

2nd

**Licensee**

FRN	0019211895
-----	------------

Type	Limited Liability Company
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**Licensee**

FiberTower Spectrum Holdings LLC  
 208 S. Akard St., RM 1015  
 Dallas, TX 75202  
 ATTN Cecil J. Mathew

P:(855)699-7073  
 F:(214)746-6410  
 E:FCCMW@att.com

**Contact**

FiberTower Spectrum Holdings LLC  
 208 S. Akard St., RM1015  
 Dallas, TX 75202  
 ATTN Cecil J. Mathew

P:(855)699-7073  
 F:(214)746-6410  
 E:FCCMW@att.com

**Ownership and Qualifications**

Radio Service Type	Fixed, Mobile		
Regulatory Status	Common Carrier, Non-Common Carrier, Private Comm	Interconnected	Yes

**Allen Ownership**

The Applicant answered "No" to each of the Allen Ownership questions.

**Basic Qualifications**

The Applicant answered "No" to each of the Basic Qualification questions.

**Tribal Land Bidding Credits**

This license did not have tribal land bidding credits.

**Demographics**

Race

Ethnicity

Gender



[illegible]



402 Rindge Ave

Relitiner

265D-55 / 265F-18  
MASSACHUSETTS BAY TRANSPORTATION  
AUTHORITY  
10 PARK PLAZA  
BOSTON, MA 02116

265F-17  
MASSACHUSETTS COMMONWEALTH OF  
STATE HOUSE  
BOSTON, MA 02133

CENTERLINE COMMUNICATIONS, LLC  
C/O SIMON BRIGHENTI, JR.  
750 W. CENTER STREET  
WEST BRIDGEWATER, MA 02379

265B-60  
BOSTON EDISON COMPANY  
C/O NSTAR ELECTRIC COMPANY  
P.O. BOX 270, PROPERTY TAX DEPT  
HARTFORD, CT 06141-0270

265C-25  
THE FRESH POND MALL LIMITED PARTNERSHIP  
545 CONCORD AVE. SUITE 400  
CAMBRIDGE, MA 02138

268B-8  
MUSTASCIO, GEORGE C.  
LORENZO CASAMASSIMA  
372 RINDGE AVE  
CAMBRIDGE, MA 02140

268B-41  
MANNING, BENADETTE  
356 RINDGE AVE  
CAMBRIDGE, MA 02138

268B-41  
BARRY, ABRAHAM & OUMOU BARRY  
358 RINDGE AVE  
CAMBRIDGE, MA 02138

268B-41  
SITHAR, DICKEY  
354-388 RINDGE AVE., #386  
CAMBRIDGE, MA 02140

268B-41  
REZAEI-KAMALABAD &  
MARIANNE REZAEI-KAMALABAD  
388 RINDGE AVE  
CAMBRIDGE, MA 02139

268B-41  
MASNY-SOKOLOWSKI, URSZULA  
C/O URSZULA MASNY-LATOS  
354 RINDGE AVE. UNIT#4  
CAMBRIDGE, MA 02138

268C-32  
SWEETWOOD, LLC.  
C/O MCCARTHY LEGAL SERVICES LLC,  
1188 CENTRE ST.  
NEWTON CENTER, MA 02459

268B-41  
NAHEED, SITARA & ASIA RAHMAN  
354-390 RINDGE AVE  
CAMBRIDGE, MA 02138

268B-45  
RINDGE TOWERS APARTMENTS LLC  
1035 CAMBRIDGE ST., #12  
CAMBRIDGE, MA 02141

268C-30  
APPLETREETWOOD, LLC.  
C/O MCCARTHY LEGAL SERVICES LLC,  
1188 CENTRE ST  
NEWTON CENTER, MA 02459

268B-35  
FERRO, JOSEPH A.,  
TR. 344 & 350-350R RINDGE REALTY TRUST  
10 WILLIAM ST  
BEDFORD, MA 01730

268B-41  
ALAM, MOHAMMED  
370 RINDGE AVE.  
CAMBRIDGE, MA 02140

268B-41  
RAJAO, ELIANA M. PEREIRA &  
CARLOS RICARDO RAJAO  
354 RINDGE AVE . UNIT#2  
CAMBRIDGE, MA 02138

268B-41  
DUGGAN, MARY D.  
354 RINDGE AVE., UNIT #5  
CAMBRIDGE, MA 02138

265B-59  
ALEWIFE PROPERTIES, LLC  
545 CONCORD AVENUE  
CAMBRIDGE, MA 02138

268B-41  
KEBEDE, ROMAN & TSEGAYE WOLDU  
366 RINDGE AVE  
CAMBRIDGE, MA 02138

268B-41  
NAPOLI, MECKY & FATMA JIDDAWI  
368 RINDGE AVE  
CAMBRIDGE, MA 02139

268B-41  
BROWN, MARIE BARBARA &  
OWEN OSBOURNE BROWN  
354 RINDGE AVE. UNIT#3  
CAMBRIDGE, MA 02138

268B-47  
RINDGE ASSOCIATES  
C/O FEDERAL MANAGEMENT CO., INC.  
536 GRANITE STREET #301  
BRAINTREE, MA 02184

268B-7  
AL-AMIN, INC.  
380 RINDGE AVE  
CAMBRIDGE, MA 02140

268B-46  
JAS HOMEOWNERSHIP LLC  
C/O JUST A START CORPORATION  
1035 CAMBRIDGE ST #12  
CAMBRIDGE, MA 02141-0003

268B-46  
SHAMS SAIFUL & FARHANAH AFROZE  
398 RINDGE AVENUE UNIT 3  
CAMBRIDGE, MA 02140

268B-46  
MCLEOD, LORNA  
392 RINDGE AVE. UNIT#7  
CAMBRIDGE, MA 02140

268B-46  
ARADOM, HAILE G. & GENET W. ARADOM  
394 RINDGE AVENUE.  
CAMBRIDGE, MA 02140

268B-46  
YOHANNES, EFREM T. &  
MEAZA T. TEWELDEMEDHIN  
390 RINDGE AVE.  
CAMBRIDGE, MA 02140

# 402 Rindge Ave

268B-46  
BROWN, MELISSA  
396 RINDGE AVENUE  
CAMBRIDGE, MA 02140

268B-46  
NERE, SOLOMON K. & HIWOT H. GEBREMARIAM  
400 RINDGE AVE.  
CAMBRIDGE, MA 02140

268B-46  
JIFARA, TEREFE R & ELIZABETH HAILESILASE  
398 RINDGE AVENUE, UNIT # 2  
CAMBRIDGE, MA 02140

268B-48  
RINDGE ASSOCIATES  
C/O FEDERAL MANAGEMENT CO.  
536 GRANITE ST., #301  
BRAINTREE, MA 02184

269-135  
IQHQ-ALEWIFE LLC  
674 VIA DE LA VALLE - STE 206  
SOLANA BEACH, CA 92075

## Pacheco, Maria

---

**From:** Simon Brighenti <sbrighenti@clinellc.com>  
**Sent:** Monday, December 13, 2021 8:13 PM  
**To:** Pacheco, Maria  
**Cc:** Ratay, Olivia  
**Subject:** Fwd: 402 RINDGE after installation photos

Hello. Please find below recent photographs of the current conditions at the 402 Rindge property. These are not actually "photos simulations" in that the facility which is the subject of our application is already constructed, installed and operational under the temporary building permit issued by the city. Kindly let me know if you have any questions. Thank you.

Thank you  
Simon J. Brighenti, Jr.

Begin forwarded message:

**From:** Bradley Harding <bharding@clinellc.com>  
**Date:** November 29, 2021 at 12:16:30 PM EST  
**To:** Simon Brighenti <sbrighenti@clinellc.com>  
**Subject:** Fwd: 402 RINDGE after installation photos

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---

**From:** Brad <bradleycharlesharding@gmail.com>  
**Sent:** Monday, November 29, 2021 11:59:05 AM  
**To:** Bradley Harding <bharding@clinellc.com>  
**Subject:** 402 RINDGE after installation photos

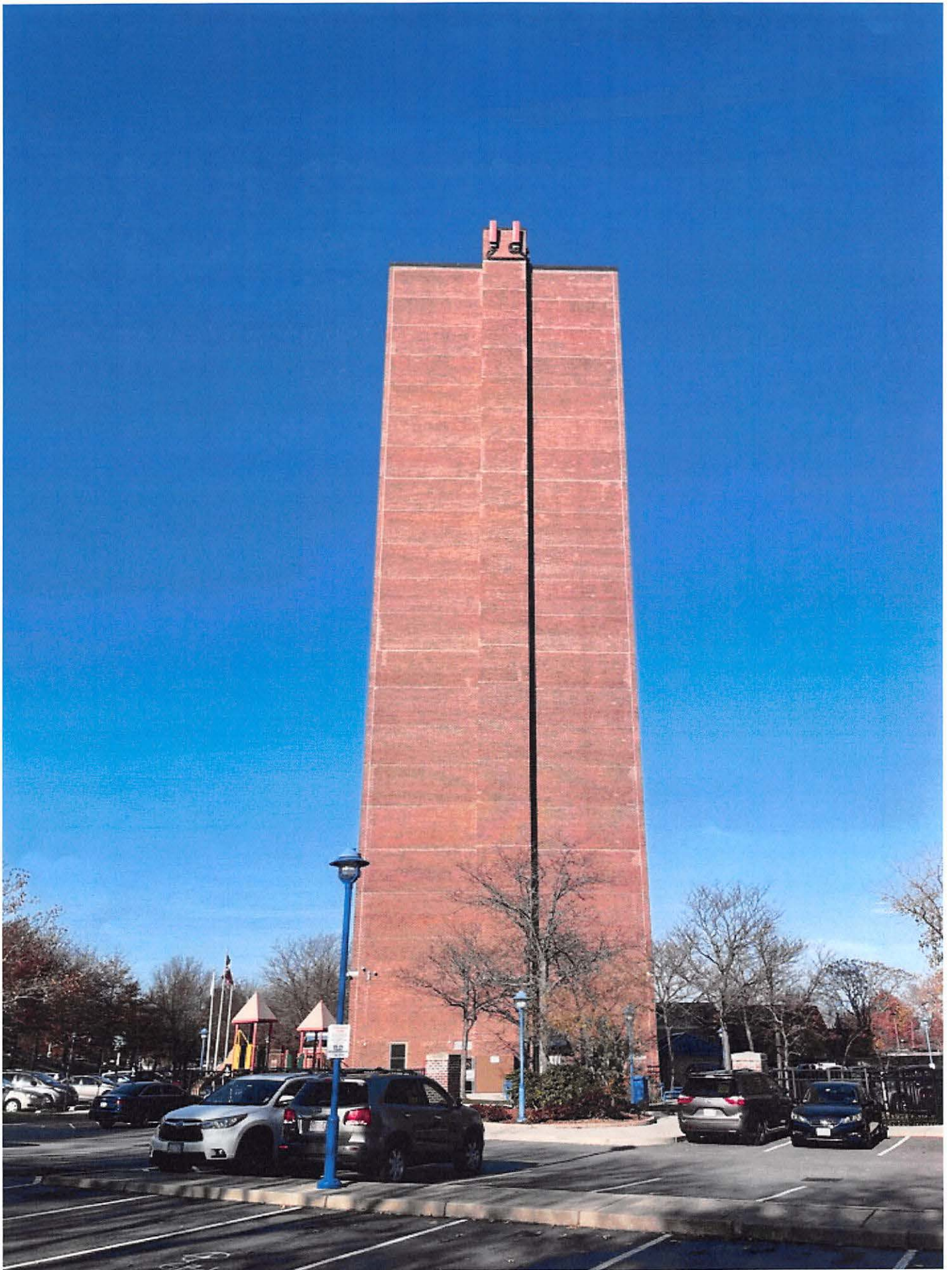


















CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- MASSACHUSETTS STATE BUILDING CODE 780 CMR (9TH EDITION)
- 2017 NATIONAL ELECTRICAL CODE
- 2012 NFPA 101 - LIFE SAFETY CODE
- 2012 NFPA 1 - FIRE CODE
- NFPA 76 - FIRE PROTECTION OF TELECOMMUNICATIONS FACILITIES
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- 2012 VERMONT FIRE AND BUILDING SAFETY CODE
- TIA/EIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSI/T 311


FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

THE PROJECT WILL COMPLY WITH THE LOW RISK HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL BY VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION.

PROJECT TEAM

CLIENT REPRESENTATIVE:	JEFF DELICOLLI CENTERLINE COMMUNICATIONS 95 RYAN DRIVE, SUITE 1 RAYNHAM, MA 02767 (603) 560-5020 jdellicolli@clinelc.com
SITE ACQUISITION:	JENNILLE SMITH CENTERLINE COMMUNICATIONS 750 W. CENTER STREET, FLOOR 3 WEST BRIDGEWATER, MA 02379 (774) 409-5807 jsmith@clinelc.com
ZONING:	JENNILLE SMITH CENTERLINE COMMUNICATIONS 750 W. CENTER STREET, FLOOR 3 WEST BRIDGEWATER, MA 02379 (774) 409-5807 jsmith@clinelc.com
ENGINEER:	CHAPPELL ENGINEERING ASSOCIATES, LLC 201 BOSTON POST ROAD WEST, SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400
RF ENGINEER:	RADU ALECSANDRU AT&T MOBILITY - NEW ENGLAND 550 COCHITUATE RD, SUITES 13 & 14 FRAMINGTON, MA 01701
CONSTRUCTION MANAGER:	RUSSELL ARCHER EMPIRE TELECOM 1150 FIRST AVENUE, SUITE 600 KING OF PRUSSIA, PA 19406 rarcher@empiretelecomm.com

SITE INFORMATION

APPLICANT/LESSEE:	 NEW CINGULAR WIRELESS PCS, LLC, 550 COCHITUATE ROAD, SUITES 13 & 14 FRAMINGHAM, MA 01701
PROPERTY OWNER:	RINDGE TOWERS APARTMENTS LLC 1035 CAMBRIDGE STREET #12 CAMBRIDGE, MA 02141
SITE ADDRESS:	402 RINDGE AVENUE CAMBRIDGE, MA 02139
PARCEL ID:	MAP 268B LOT 45
LATITUDE:	42.393100° (NAD 83)
LONGITUDE:	-71.139700° (NAD 83)
BUILDING HEIGHT ELEVATION:	216'-4"± AGL
ZONING JURISDICTION:	CITY OF CAMBRIDGE
ZONING DISTRICT:	RESIDENCE C-2
EXISTING/PROPOSED USE:	UNMANNED TELECOMMUNICATION



at&t

SITE NUMBER: MAL05892

SITE NAME: TEMP NSB AT CAMBRIDGE MA (FA15633690) - MA5892S

402 RINDGE AVENUE  
CAMBRIDGE, MA 02139  
MIDDLESEX COUNTY

VICINITY MAP



NOT TO SCALE  
IMAGE SOURCE: USGS TOPOGRAPHIC DATA

GENERAL LOCATION MAP



NOT TO SCALE  
IMAGE SOURCE: GOOGLE MAPS / BING

DRIVING DIRECTIONS

MERGE ONTO I-90 EAST/MASS PIKE TOWARD BOSTON. USE RIGHT 2 LANES TO TAKE EXIT 123 TOWARD I-95/PORTSMOUTH/PROVIDENCE. KEEP LEFT AT FORK & FOLLOW SIGNS FOR I-95 NORTH/PORTSMOUTH. MERGE ONTO I-95 NORTH. TAKE EXIT 45A FOR MA-2 EAST TOWARD BOSTON/CAMBRIDGE EAST. KEEP LEFT TO STAY ON MA-2 EAST. USE MIDDLE LANE TO STAY ON MA-2 EAST. KEEP RIGHT TO CONTINUE ON MA-2 EAST/CONCORD TURNPIKE. TURN SLIGHTLY RIGHT ONTO ALEWIFE BROOK PARKWAY. AT TRAFFIC CIRCLE, TAKE THE 4TH EXIT TO STAY ON ALEWIFE BROOK PARKWAY. TURN RIGHT ONTO RINDGE AVENUE. SITE IS LOCATED ON THE RIGHT HAND SIDE.

LEGAL DESCRIPTION

ASSESSORS PARCEL NUMBER: MAP 268B LOT 45

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

RF INFORMATION

	GSM	LTE
Tx	869 - 874.6 MHz 890 - 891.4 MHz 1950 - 1952.8 MHz 1970 - 1980 MHz	874.6 - 879.6 MHz 1945 - 1950 MHz
Rx	824 - 829.4 MHz 845 - 846.4 MHz 1870 - 1872.8 MHz 1890 - 1900 MHz	829.6 - 834.4 MHz 1865 - 1869.8 MHz
MAX ERP:	850 MHz: 54 WATTS 1900 MHz: 54.5 WATTS	

UNDERGROUND SERVICE ALERT



AT LEAST 72 HOURS PRIOR TO DIGGING,  
THE CONTRACTOR IS REQUIRED TO  
CALL DIG SAFE AT 811

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW & MAY IMPOSE CHANGES OR MODIFICATIONS.

DISCIPLINE	SIGNATURE	DATE
CENTERLINE SITE ACQUISITION:		
SMARTLINK CONSTRUCTION MANAGER:		
AT&T PROJECT MANAGER:		

GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWINGS  
CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK OR BE RESPONSIBLE FOR SAME.

CONTRACTOR SHALL BE REQUIRED TO SCHEDULE AND COORDINATE CONSTRUCTION WITH GICWD (OWNER) AND SIMON OPERATION SERVICES (OPERATOR) TO LIMIT DISTURBANCE, MAINTAIN ACCESS AND RESTORE THE SITE TO AT LEAST ITS EXISTING CONDITION AT THE OF THE PROJECT.

PROJECT DESCRIPTION

THIS PROJECT WILL BE COMPRISED OF:

TOWER TOP EQUIPMENT TO INCLUDE:

- NEW AT&T ANTENNAS: (2) ANTENNAS PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (6) ANTENNAS
- NEW AT&T RADIOS: (5) RADIOS PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (15) RADIOS
- NEW AT&T (3) RAYCAP SURGE SUPPRESSORS

GROUND EQUIPMENT TO INCLUDE

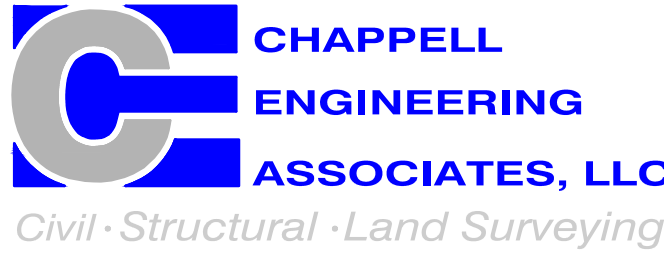
- NEW AT&T (3) EQUIPMENT CABINETS MOUNTED TO NEW STEEL CANTILEVER FRAME
- NEW AT&T 200A ELECTRIC PANEL
- NEW AT&T FIBER CABINET
- NEW AT&T DISCONNECT
- NEW AT&T 200A METER & CB

DRAWING INDEX

SHEET	
T01	TITLE SHEET
T02	SPECIFICATIONS
T03	GENERAL REQUIREMENTS, LEGEND & ABBREVIATIONS
T04	GENERAL SIGNAGE DETAILS
A01	ROOF PLAN
A02	BUILDING ELEVATION
A03	ANTENNA PLAN & DETAILS
A04	EQUIPMENT PLAN & DETAILS
S01	ANTENNA & RADIO MOUNTING DETAILS
S02	EQUIPMENT FRAME DETAILS
E01	ELECTRICAL DIAGRAMS, DETAILS & NOTES
E02	GROUNDING DIAGRAM, DETAILS & NOTES
E03	PLUMBING DIAGRAM



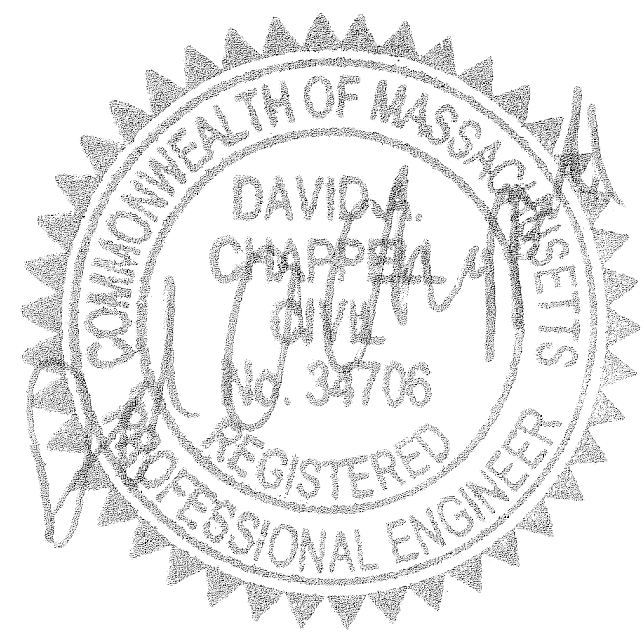
AT&T MOBILITY  
500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06067



R.K. EXECUTIVE CENTRE  
201 BOSTON POST ROAD WEST, SUITE 101  
MARLBOROUGH, MA 01752  
TEL: (508) 481-7400 FAX: (508) 481-7406

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY & CONFIDENTIAL TO AT&T WIRELESS  
ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO AT&T WIRELESS IS STRICTLY PROHIBITED

REV.	DATE	REVISION DESCRIPTION
2	08-10-21	CONSTRUCTION REVISED
1	06-29-21	ISSUED FOR CONSTRUCTION
0	06-24-21	ISSUED FOR REVIEW



ENGINEER/LAND SURVEYOR		DATE
PROJECT INFORMATION:		
MAL05892 TEMP NSB AT CAMBRIDGE MA (FA15633690) - MA5892S		
402 RINDGE AVENUE CAMBRIDGE, MA 02139		
DRAWN BY: CMC	CHECKED BY: JMT	
SHEET TITLE:  TITLE SHEET		
SHEET NUMBER:  T01		REVISION:  2



GENERAL CONSTRUCTION NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:

GENERAL CONTRACTOR

SUBCONTRACTOR - CONTRACTOR (CONSTRUCTION)

OWNER - AT&T

2. ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.

3. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.

5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH WORK.

8. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

9. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE SPACE FOR APPROVAL BY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING.

10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.

11. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINE.

12. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.

13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. SUBCONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.

14. WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. SUBCONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEViate FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.

15. SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.

16. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

17. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

18. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND/OR BUILDING.

19. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.

20. THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.

21. THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-B-C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.

22. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT/ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, D) TRENCHING & EXCAVATION.

23. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ARCHITECT/ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.

24. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.

25. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.

26. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

27. THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.

28. ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.

29. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.

30. SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.

31. SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.

32. THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).

33. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.

34. NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.

35. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION OF AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING." IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.

36. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF SUBCONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.

37. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

38. NO WHITE STROBE LIGHTS ARE PERMITTED. ANY REQUIRED LIGHTING MUST MEET FAA STANDARDS AND REQUIREMENTS.

39. ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

40. NO SIGNIFICANT NOISE, SMOKE, DUST OR VIBRATIONS WILL RESULT FROM THIS FACILITY. (DISREGARD THIS NOTE IF THIS SITE HAS A GENERATOR)

41. NO ADDITIONAL PARKING TO BE PROPOSED. EXISTING ACCESS AND PARKING TO REMAIN, UNLESS NOTED OTHERWISE.

42. NO LANDSCAPING IS PROPOSED AT THIS SITE, UNLESS NOTED OTHERWISE.

ELECTRICAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.

2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.

3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:

C - NATIONAL FIRE CODES

A. UL - UNDERWRITERS LABORATORIES

B. NEC - NATIONAL ELECTRICAL CODE

C. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.

D. OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT

E. SBC - STANDARD BUILDING CODE

4. DO NOT SCALE ELECTRICAL DRAWINGS; REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH 'CONSTRUCTION MANAGER' ANY SIZES AND LOCATIONS WHEN NEEDED.

5. EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.

6. CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS, AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.

7. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.

8. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS, SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC., ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.

9. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.

10. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.

11. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.

12. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTY BY AT&T.

13. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION & APPROVAL BY CONSTRUCTION MANAGER.

14. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.

15. CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.

16. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.

17. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.

18. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.

19. DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION, BACKFILLING AND COMPACTION. REFER TO 'FOUNDATION, EXCAVATION, AND BACKFILLING NOTES.'

20. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA, AND ICEE.

21. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURERS CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES, AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.

22. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.

23. THE ELECTRICAL CONTRACTOR SHALL LABEL AL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

24. DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MADE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.

25. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS 'NO-OXIDE A' BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.

26. RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TC2 - 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADING RIGID CONDUIT. COAT ALL THREADS WITH 'BRITZ ZINC' OR 'GOLD CALV.'

27. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.

28. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, 800 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.

29. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.

30. SERVICES: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR POWER.

31. TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.

32. ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH.

33. CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTION TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM."

34. ALL BOLTS SHALL BE STAINLESS STEEL

GROUNDING NOTES:

1. COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.

2. EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P," "A," "N," "T") WITH 1" LETTERS.

3. ALL HARDWARE 18-8 STAINLESS STEEL, INCLUDING LOCK WASHERS. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.

4. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.

5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE.

6. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.

7. WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER, THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.

8. ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

FOUNDATION, EXCAVATION, & BACKFILL NOTES:

1. ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL.

2. ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL, AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.

3. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF INADEQUATE BEARING CAPACITY IS REACHED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.

4. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE. FREE FROM CLODS OR LARGE STONES OVER 2 1/2 MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.

5. ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6" THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557

6. NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HOURS PRIOR TO BACK FILLING.

7. FINISHED GRADING SHALL BE PROVIDED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.

8. NEWLY GRADED SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY 'CONSTRUCTION MATERIAL 1-800-239-3841' OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECCURENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICHEVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FOOT TYPE NO.57 FOR FENCED COMPOUND; FOOT TYPE NO. 67 FOR ACCESS DRIVE AREA.

9. IN ALL AREAS TO RECEIVE FILL, REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.

10. WHEN SUBGRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RE-COMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OR FILLS.

11. IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.

12. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED WITH THE CONDITION THAT ANY UNFAVORABLE AMOUNTS OF ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ANY ADDITIONAL GRAVEL RESURFACING MATERIAL AS NEEDED TO PROVIDE A FULL DEPTH COMPACTED SURFACE THROUGHOUT SITE.

13. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUBGRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE.

14. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING 'MATS' OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.

15. DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.

16. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.

ENVIRONMENTAL NOTES:

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.

2. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.

3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.

4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.

6. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.

7. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.

8. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.

9. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

CONCRETE MASONRY NOTES:

1. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90, GRADE N-1, (F<sub>m</sub>=1,500 PSI), MEDIUM WEIGHT (115).

2. MORTAR SHALL BE TYPE "S" (MINIMUM 1,800 PSI AT 28 DAYS).

3. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS.

4. ALL CELLS CONTAINING REINFORCING STEEL OR EMBEDDED ITEMS AND ALL CELLS IN RETAINING WALLS AND WALLS BELOW GRADE SHALL BE SOLID GROUTED.

5. ALL HORIZONTAL REINFORCING STEEL SHALL BE PLACED IN BOND BEAM OR LINTEL BEAM UNITS.

6. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1-1/2" BELOW TOP OF THE UPPERMOST UNIT.

7. ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.

8. PROVIDE INSPECTION AND CLEAN-OUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFT IN EXCESS OF 4'-0" OF HEIGHT.

9. ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR.

10. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.

11. REINFORCING BARS - SEE NOTES UNDER "REINFORCING STEEL" FOR REQUIREMENTS.

12. PROVIDE ONE BAR DIAMETER (A MINIMUM OF 1/2") GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.

13. LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET.

14. LIFT GROUTED CONSTRUCTION MAY BE USED IN CONFORMANCE WITH PROJECT SPECIFICATIONS AND SECTION 2104.6.1 OF CURRENT BUILDING CODE.

15. ALL CELLS IN CONCRETE BARS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS NOTED OTHERWISE OR SPECIFIED.

16. CELLS SHALL BE IN VERTICAL ALIGNMENT. DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.

17. REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.

18. SAND SHALL BE CLEAN, SHARP AND WELL GRADED, FREE FROM INJURIOUS AMOUNTS OF DUST, LUMPS, SHALE, ALKALU OR ORGANIC MATERIAL.

19. BRICK SHALL CONFORM TO ASTM C-62 AND SHALL BE GRADE MW OR BETTER.

STRUCTURAL CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI-301-10

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH 1c=2,500 PSI AT 28 DAYS UNLESS NOTED OTHERWISE.

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH 3 IN.

CONCRETE EXPOSED TO EARTH OR WEATHER:

#6 AND LARGER 2 IN.

#5 AND SMALLER & WWF 1-1/2 IN.

CONCRETE NOT EXPOSED TO EARTH OR WEATHER, NOR CAST AGAINST THE GROUND:

SLAB AND WALL 3/4 IN.

BEAMS AND COLUMNS 1-1/2 IN.

5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

6. HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLD, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.

7. USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICBO & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:

W-SHAPES: ASTM A992, 50 KSI

ANGLES, BOLTS, CHANNELS: ASTM A36, 36 KSI

HSS SECTIONS: ASTM 500, 46 KSI

PIPE SECTIONS: ASTM A53-E, 35 KSI

2. ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.

3. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILL WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC 'MANUAL OF STEEL CONSTRUCTION.' PAINTED SURFACES SHALL BE TOUCHED UP.

4. EXPOSED CARBON STEEL SHALL BE ASTM A325 BEARING TYPE 3/4" O CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.

5. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" O ASTM A307 BOLTS UNLESS NOTED OTHERWISE.

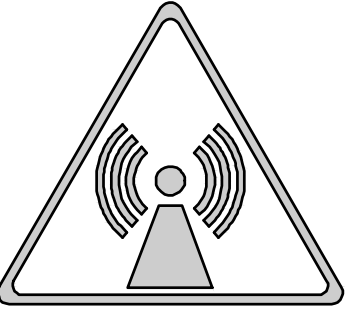
6. FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.







NOTICE

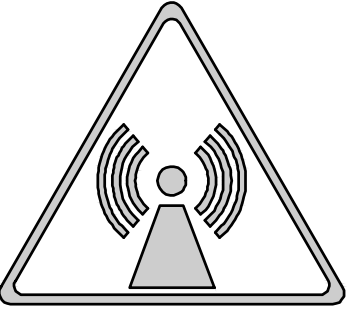


Beyond This Point you are entering a controlled area where RF emissions *may exceed* the FCC General Population Exposure Limits.

Follow all posted signs and site guidelines for working in a RF environment.

Ref. 47CFR 1.1307(b)

CAUTION



Beyond This Point you are entering a controlled area where RF emissions *may exceed* the FCC Occupational Exposure Limits.

Obey all posted signs and site guidelines for working in a RF environment.

Ref. 47CFR 1.1307(b)



ALERTING SIGNS

ALERTING SIGNS

WARNING!

DANGER DO NOT TOUCH TOWER!

SERIOUS "RF" BURN HAZARD!

MAINTAIN AN ADEQUATE CLEARANCE BETWEEN TOWER SUPPORTS AND GUY WIRES

FAILURE TO OBEY ALL POSTED SIGNS AND SITE OUTLINE'S FOR WORKING IN A RADIO FREQUENCY ENVIRONMENT COULD RESULT IN SERIOUS INJURY. CONTACT CLEARANCE MAY EXCEED LIMITS PRESCRIBED BY ANSI/IEEE C95.1-1997 FOR CONTROLLED ENVIRONMENTS.

PROPERTY OF AT&T

AUTHORIZED PERSONNEL ONLY

IN CASE OF EMERGENCY, OR PRIOR TO PERFORMING MAINTENANCE ON THIS SITE, CALL 800-636-2822 AND REFERENCE CELL SITE NUMBER

ALERTING SIGN

INFO SIGN #5



INFO SIGN #3

INFORMATION

AT&T operates telecommunications antennas at this location. Remains at least 3 feet away from any antenna and obey all posted signs.

Contact the owner(s) of the antenna(s) before working closer than 3 feet from the antenna.

Contact AT&T at \_\_\_\_\_ prior to performing any maintenance or repairs near AT&T antennas. This is vital.

Contact the management office if this door/hatch/gate is found unlocked.

INFORMACION

Ata este propiedad se ubican antenas de telecomunicaciones operadas por AT&T. Evite de mantener una distancia de no menos de 3 pies y obedezca todas las ordenes.

Comuniquese con el propietario o los propietarios de las antenas antes de trabajar o acercarse a una distancia de menos de 3 pies de la antena.

Comuniquese con AT&T \_\_\_\_\_ antes de realizar cualquier mantenimiento o reparaciones cerca de las antenas de AT&T.

Notas en la antena tiene acceso.

Para comunicarse con la oficina de la administracion del edificio al esta puerta o compuerta se encuentra sin cerrada.

INFO SIGN #1

INFO SIGN #2

INFO SIGN #4

STAY BACK 3 FEET FROM ANTENNA

GENERAL SIGNAGE GUIDELINES								
STRUCTURE TYPE	INFO SIGN #1	INFO SIGN #2	INFO SIGN #3	INFO SIGN #4	INFO SIGN #5	STRIPING	NOTICE SIGN	CAUTION SIGN
TOWERS								
MONOPOLE / MONOPINE / MONOPALM	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	CLIMBING SIDE OF THE TOWER	ON BACKSIDE OF ANTENNAS	ON THE SIDE OF ANTENNAS	ON THE SHELTER DOOR OR ON ONE OUTDOOR EQUIPMENT CABINET			AT THE HEIGHT OF THE FIRST CLIMBING STEP. MIN. 9FT. ABOVE GROUND
SCE TOWERS / TOWERS WITH VOLTAGE	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	CLIMBING SIDE OF THE TOWER	ON BACKSIDE OF ANTENNAS	ON THE SIDE OF ANTENNAS	ON THE SHELTER DOOR OR ON ONE OUTDOOR EQUIPMENT CABINET			AT THE HEIGHT OF THE FIRST CLIMBING STEP. MIN. 9FT. ABOVE GROUND
LIGHT POLES / FLAG POLES	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA	ON BACKSIDE OF ANTENNAS	ON THE SIDE OF ANTENNAS	ON THE SHELTER DOOR OR ON ONE OUTDOOR EQUIPMENT CABINET			
UTILITY WOOD POLES (JPA)	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA	ON BACKSIDE OF ANTENNAS	ON THE SIDE OF ANTENNAS	ON THE SHELTER DOOR OR ON ONE OUTDOOR EQUIPMENT CABINET		IF GP MAX VALUE OF MPE AT ANTENNA LEVEL IS: 0-99%: NOTICE SIGN; OVER 99%: CAUTION SIGN AT NO LESS THAN 3FT BELOW ANTENNA AND 9FT ABOVE GROUND	
MICROCELLS MOUNTED ON NON-JPA POLES	ENTRANCE GATES, SHELTER DOORS OR ON THE OUTDOOR CABINETS	ON THE POLE, NO LESS THAN 3FT BELOW THE ANTENNA	ON BACKSIDE OF ANTENNAS	ON THE SIDE OF ANTENNAS	ON THE SHELTER DOOR OR ON ONE OUTDOOR EQUIPMENT CABINET		NOTICE OR CAUTION SIGN AT NO LESS THAN 9FT ABOVE GROUND; ONLY IF THE EXPOSURE EXCEEDS 90% OF THE GENERAL PUBLIC EXPOSURE AT 6FT ABOVE GROUND	
ROOF TOPS								
AT ALL ACCESS POINTS OF THE ROOF	X							
ON ANTENNAS	X		X	X				
CONCEALED ANTENNAS	X	X						
ANTENNAS MOUNTED FACING OUTSIDE THE BUILDING	X	X						
ANTENNAS ON SUPPORT STRUCTURE	X	X						
ROOFTOP GRAPH:								
RADIATION AREA IS WITHIN 3FT FROM ANTENNA	X	ADJACENT TO EACH ANTENNA					EITHER NOTICE OR CAUTION SIGN (BASED ON ROOFVIEW RESULTS) AT ANTENNAS / BARRIER	
RADIATION IS BEYOND 3FT FROM ANTENNA	X	ADJACENT TO EACH ANTENNA				DIAGONAL, YELLOW STRIPING AS TO ROOFVIEW GRAPH		
CHURCH STEEPLES	ACCESS TO STEEPLE	ADJACENT TO ANTENNAS IF ANTENNAS ARE CONCEALED	ON BACKSIDE OF ANTENNAS	ON THE SIDE OF ANTENNAS	ON THE SHELTER DOOR OR ON ONE OUTDOOR EQUIPMENT CABINET			CAUTION SIGN AT THE ANTENNAS
WATER TANKS	ACCESS TO WATER TANK	ADJACENT TO ANTENNAS IF ANTENNAS ARE CONCEALED	ON BACKSIDE OF ANTENNAS	ON THE SIDE OF ANTENNAS	ON THE SHELTER DOOR OR ON ONE OUTDOOR EQUIPMENT CABINET			CAUTION SIGN AT THE ANTENNAS
NOTES FOR ROOFTOP SITES: 1. EITHER NOTICE OR CAUTION SIGNS NEED TO BE POSTED AT EACH SECTOR AS CLOSE AS POSSIBLE TO THE OUTER EDGE OF THE STRIPED OFF AREA OR THE OUTER ANTENNAS OF THE SECTOR. 2. IF ROOFVIEW SHOWS: ONLY BLUE = NOTICE SIGN, BLUE AND YELLOW = CAUTION SIGN TO BE INSTALLED. 3. SHOULD THE REQUIRED STRIPING AREA INTERFERE WITH ANY STRUCTURES OR EQUIPMENT (A/C, VENTS, ROOF HATCH, DOORS, OTHER ANTENNAS, DISHES, ETC.), PLEASE NOTIFY AT&T TO MODIFY THE STRIPING AREA, PRIOR TO STARTING THE WORK.								

AT&T MOBILITY  
500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06067

R.K. EXECUTIVE CENTRE  
201 BOSTON POST ROAD WEST, SUITE 101  
MARLBOROUGH, MA 01752  
TEL: (508) 481-7400 FAX: (508) 481-7406

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2	08-10-21	CONSTRUCTION REVISED
1	06-29-21	ISSUED FOR CONSTRUCTION
0	06-24-21	ISSUED FOR REVIEW
REV.	DATE	REVISION DESCRIPTION

ENGINEER/LAND SURVEYOR DATE

PROJECT INFORMATION:  
MAL05892  
TEMP NSB AT  
CAMBRIDGE MA  
(FA15633690) - MA5892S

402 RINDGE AVENUE  
CAMBRIDGE, MA 02139

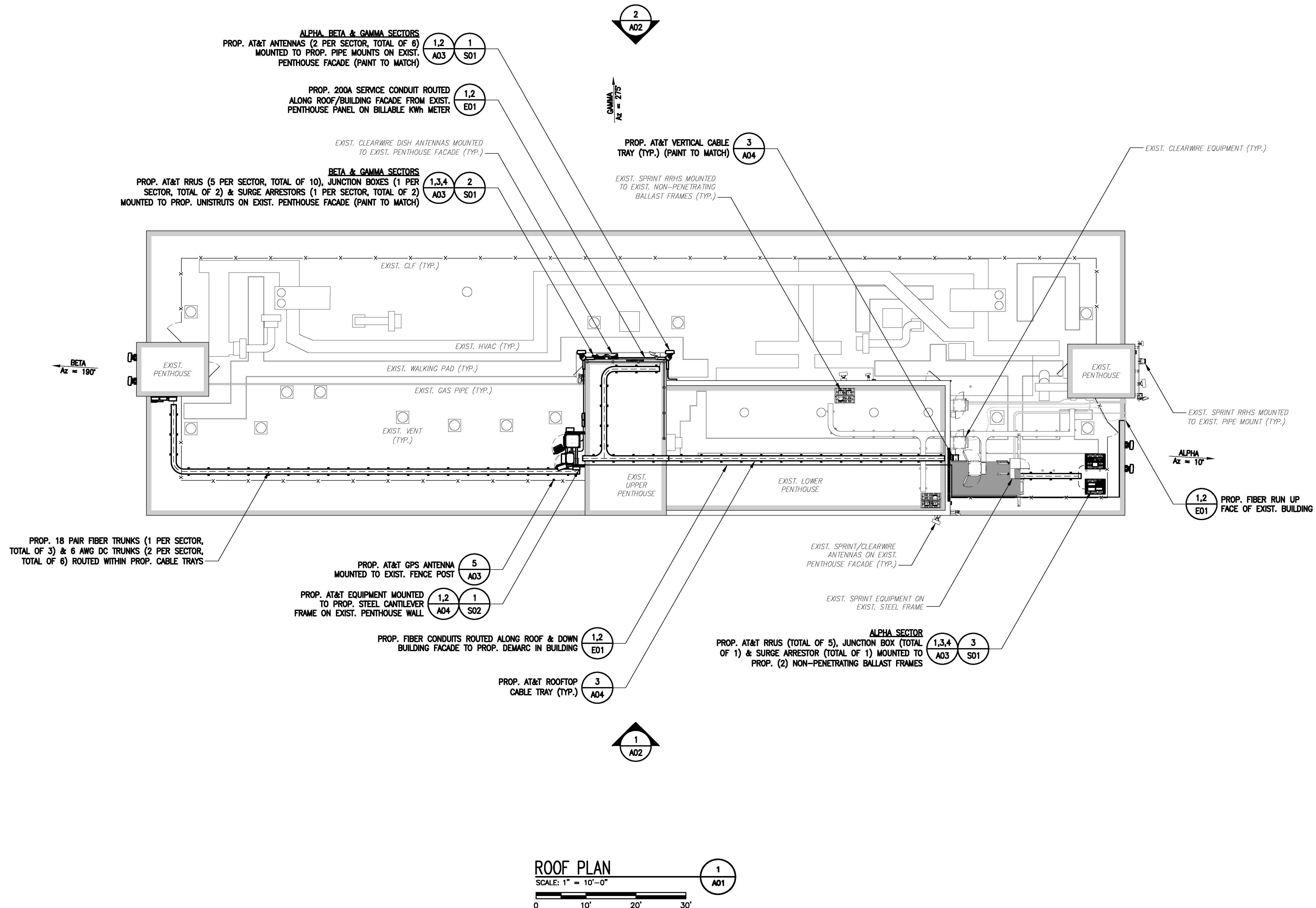
DRAWN BY: CMC  
CHECKED BY: JMT

SHEET TITLE:  
GENERAL SIGNAGE DETAILS

SHEET NUMBER: T04  
REVISION: 2

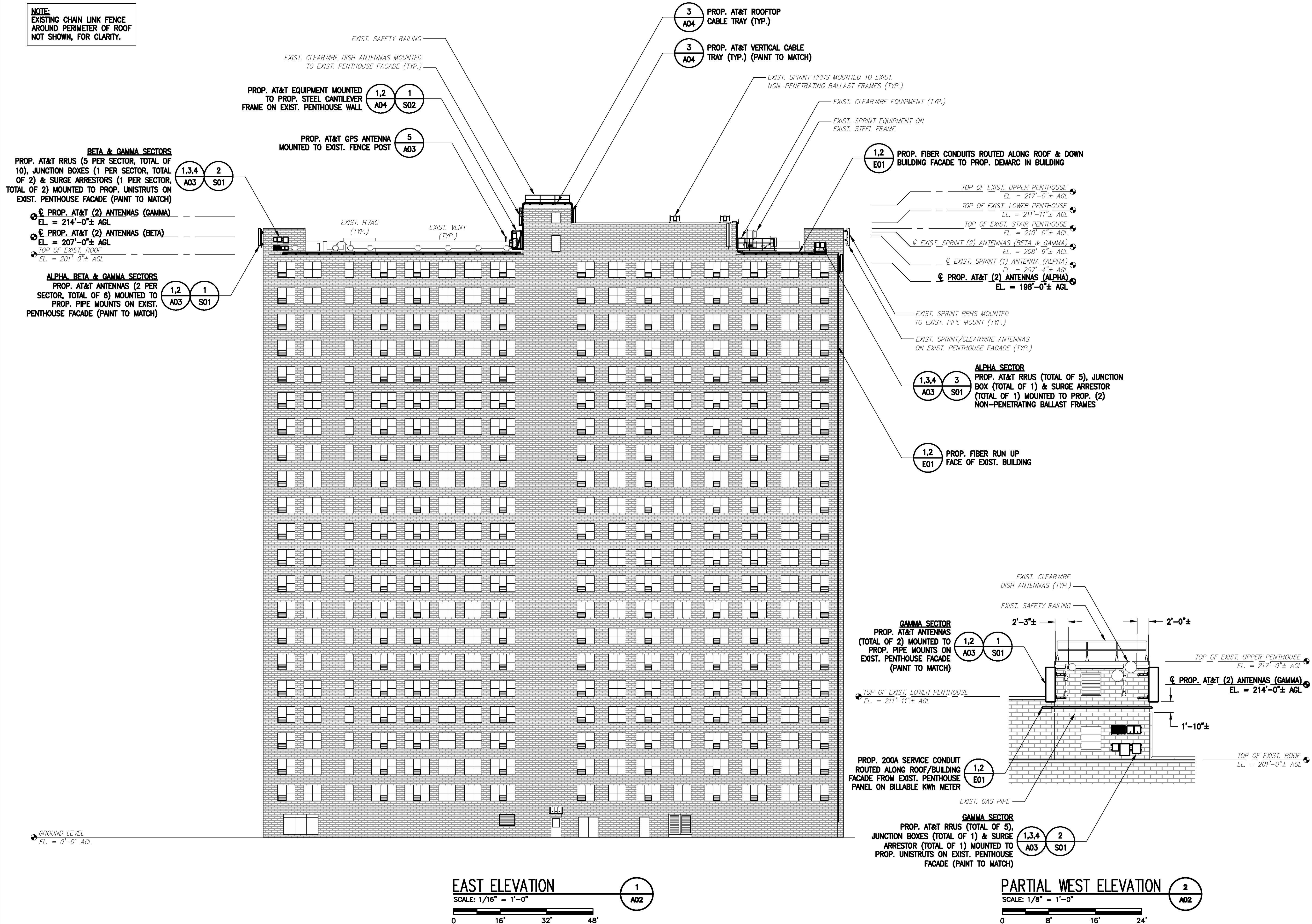
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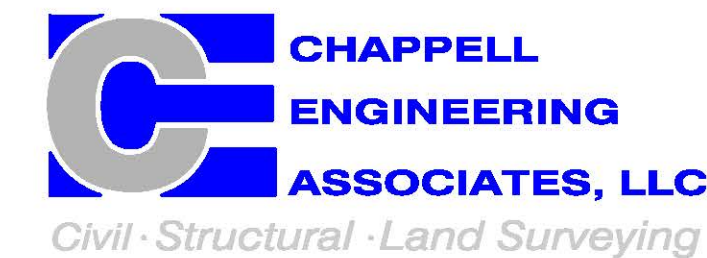




NOTE:  
EXISTING CHAIN LINK FENCE  
AROUND PERIMETER OF ROOF  
NOT SHOWN, FOR CLARITY.



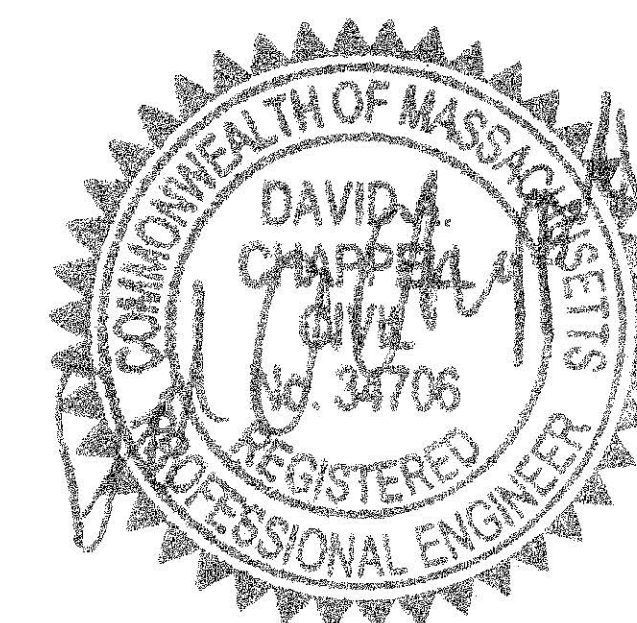
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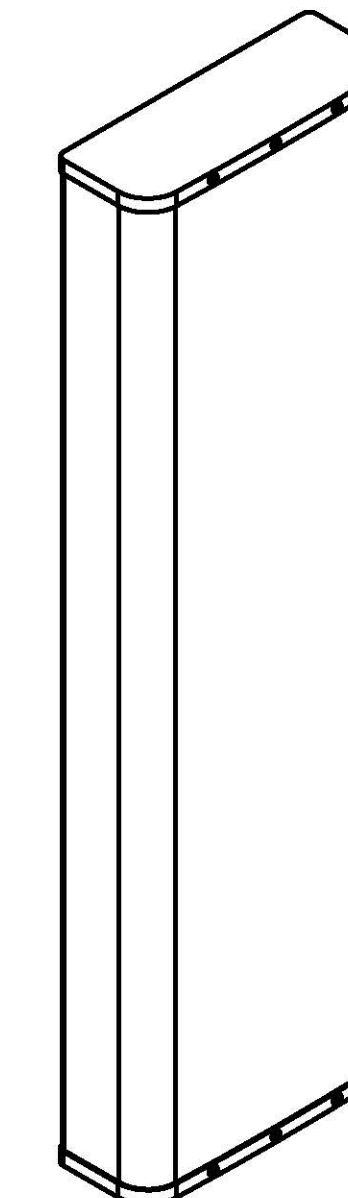
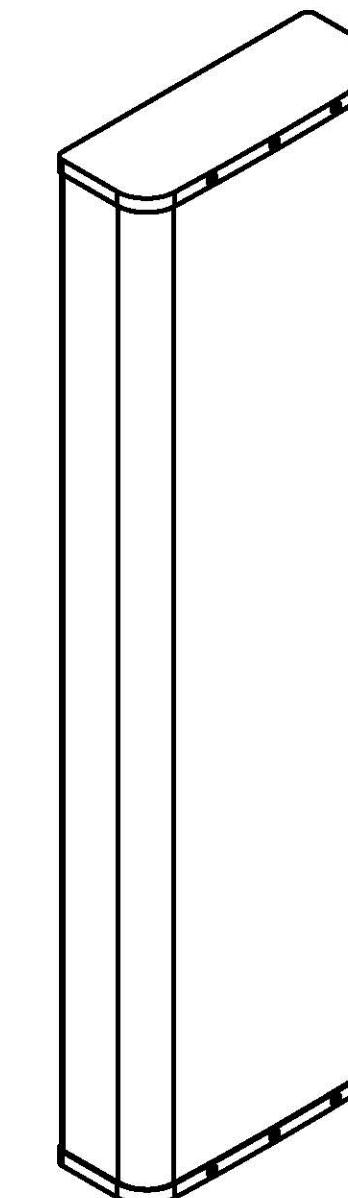
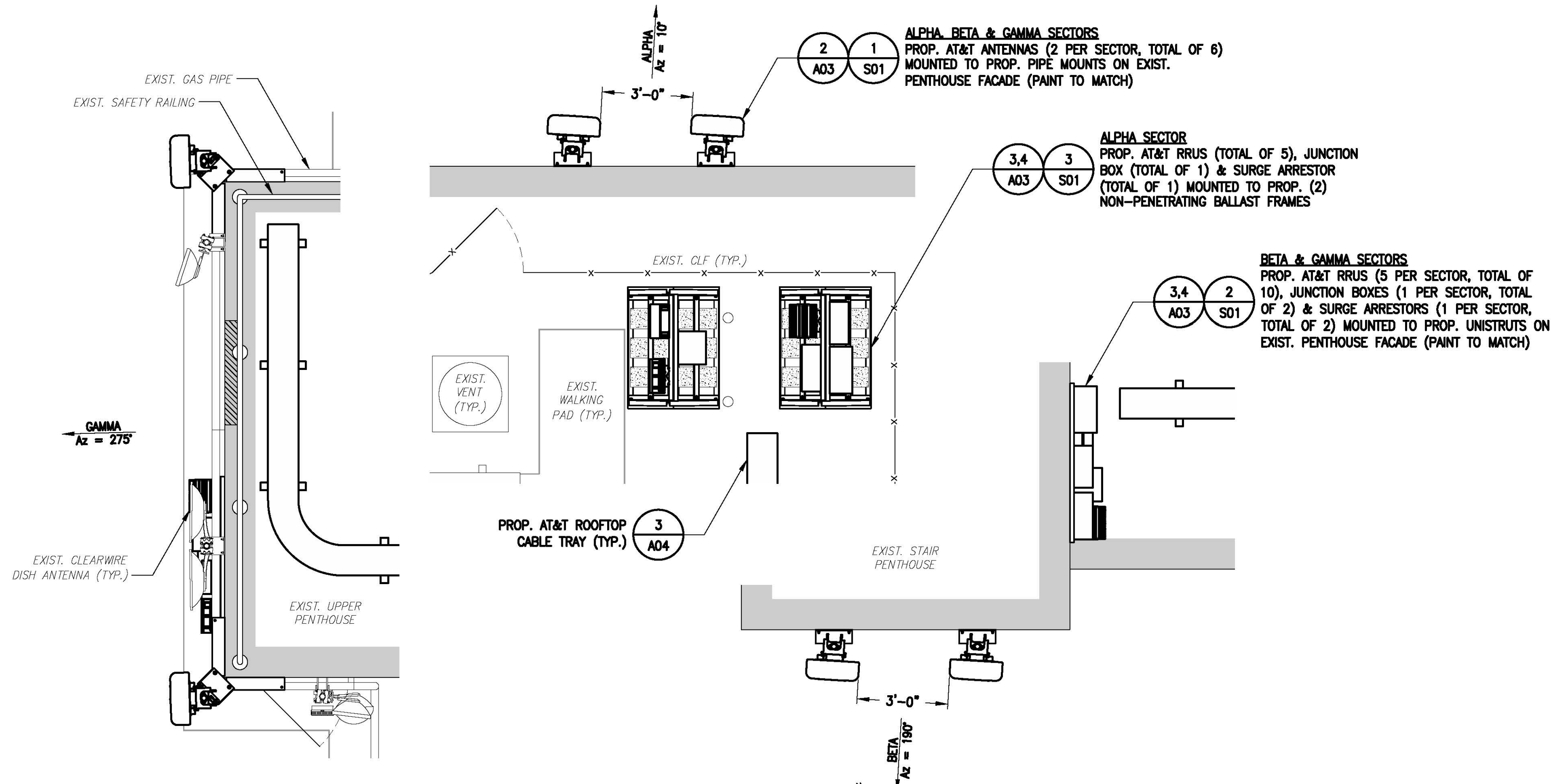
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ENGINEER/LAND SURVEYOR		DATE
PROJECT INFORMATION:		
MAL05892 TEMP NSB AT CAMBRIDGE MA (FA15633690) - MA5892S		
402 RINDGE AVENUE CAMBRIDGE, MA 02139		
DRAWN BY:	CHECKED BY:	
CMC	JMT	
SHEET TITLE:		
BUILDING ELEVATIONS		
SHEET NUMBER:	REVISION:	
A02	2	





**CCI TPA65R-BU6D ANTENNA**  
DIMENSIONS: 71.2"H x 20.7"W x 7.7"D  
WEIGHT: 69.0 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3

**CCI DMP65R-BU6D ANTENNA**  
DIMENSIONS: 71.2"H x 20.7"W x 7.7"D  
WEIGHT: 96.0 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3

**ANTENNA DETAILS**  
SCALE: N.T.S.

2  
A03



**ERICSSON RADIO 8843 B2+B66A**  
DIMENSIONS: 14.96"H x 13.2"W x 11.1"D  
WEIGHT: 75.0 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3



**ERICSSON RADIO 4449 B5+B12**  
DIMENSIONS: 14.96"H x 13.19"W x 10.43"D  
WEIGHT: 73.0 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3



**ERICSSON RADIO 4415 B30**  
DIMENSIONS: 14.96"H x 13.19"W x 5.04"D  
WEIGHT: 43.0 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3



**ERICSSON RADIO 4478 B14**  
DIMENSIONS: 18.1"H x 13.4"W x 8.26"D  
WEIGHT: 59.4 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3



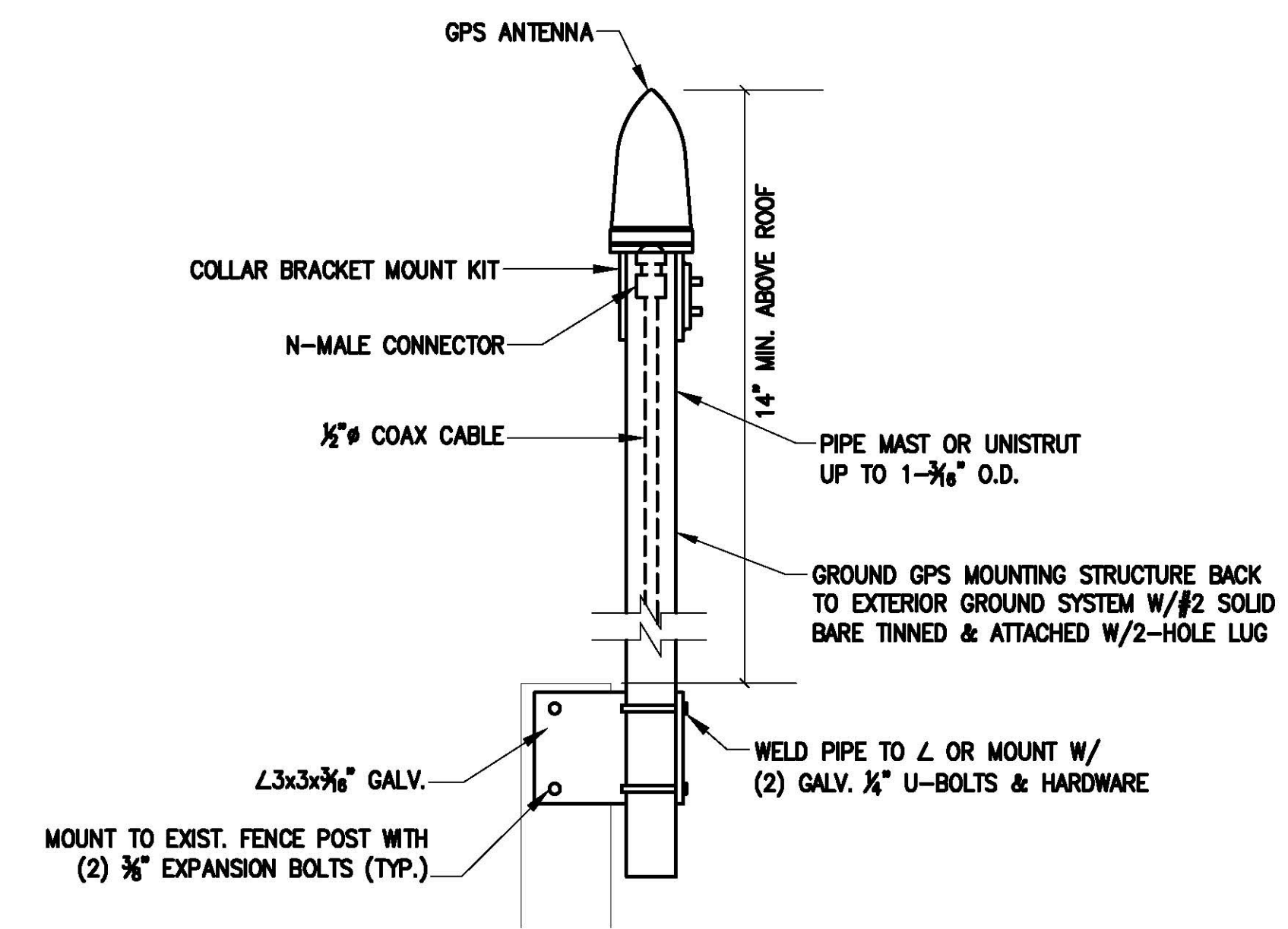
**ERICSSON RRUS 12**  
DIMENSIONS: 20.4"H x 18.5"W x 7.5"D  
WEIGHT: 58.0 lbs  
QUANTITY: 1 PER SECTOR, TOTAL OF 3



**RAYCAP DC6-48-60-18-8C-EV**  
DIMENSIONS: 17.9"H x 10.24"W x 10.24"D  
WEIGHT: 16.0 lbs  
QUANTITY: TOTAL OF 3

**SURGE SUPPRESSOR DETAIL**  
SCALE: N.T.S.

4  
A03



**GPS MOUNTING DETAIL**  
SCALE: N.T.S.

5  
A03



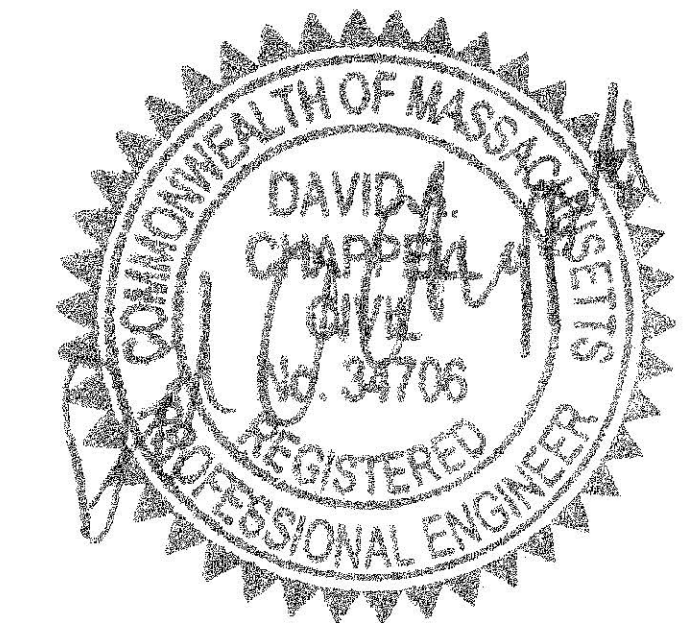
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500 ENTERPRISE DRIVE, SUITE 3A  
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**(FA15633690) - MA5892S**  
**402 RINDGE AVENUE**  
**CAMBRIDGE, MA 02139**

DRAWN BY: CMC  
CHECKED BY: JMT

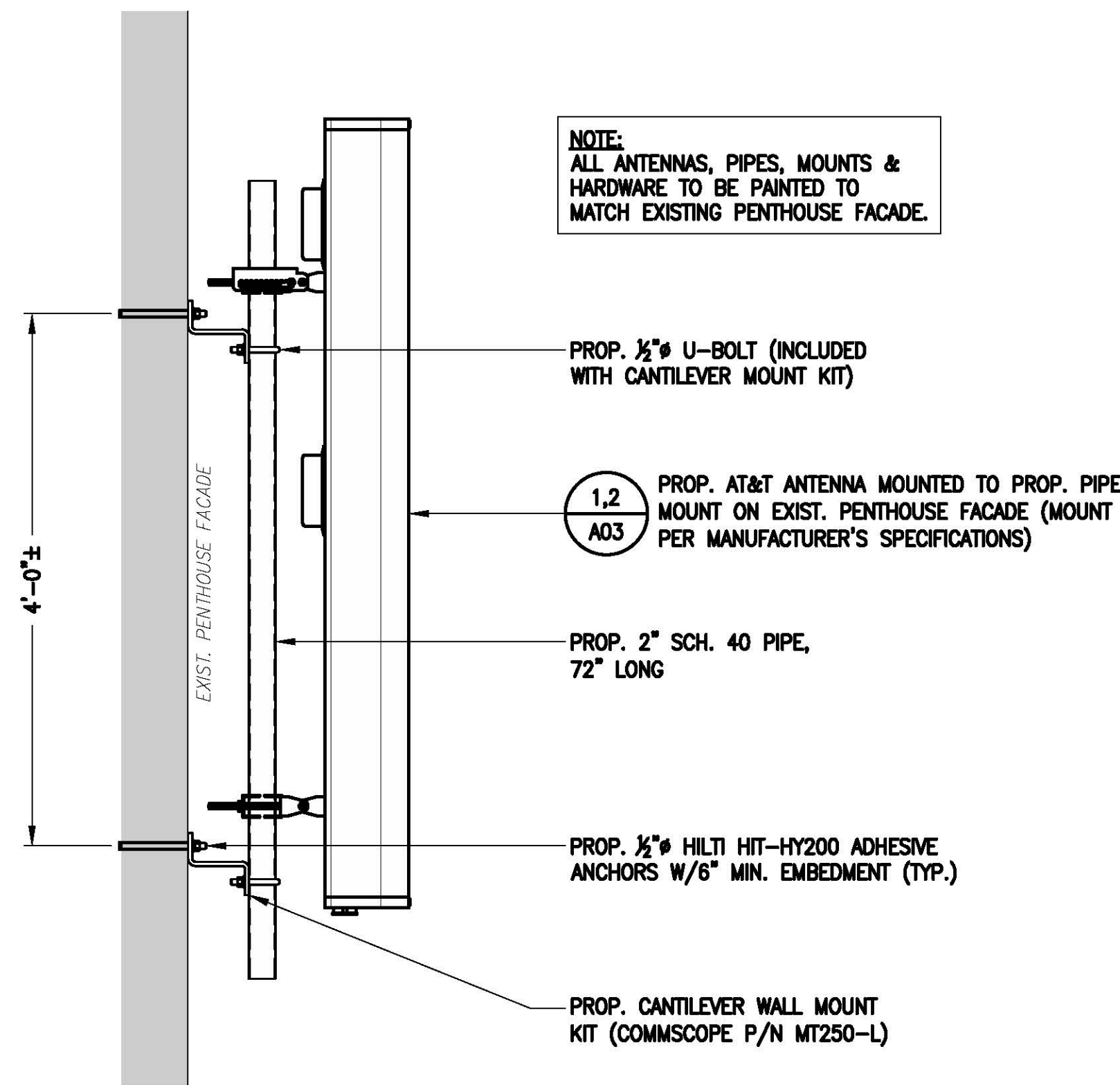
SHEET TITLE:  
**ANTENNA PLAN & DETAILS**

SHEET NUMBER: **A03**  
REVISION: **2**

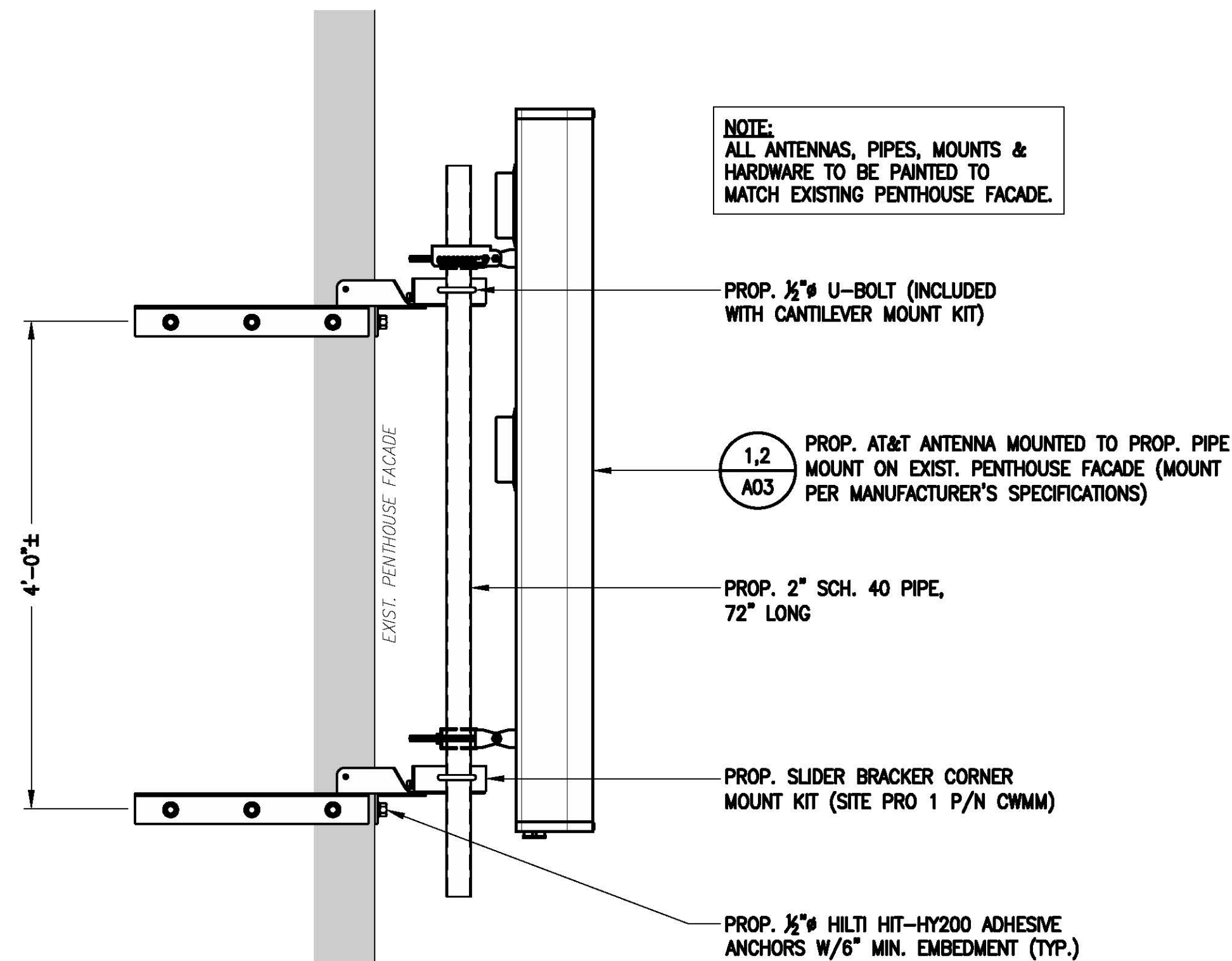






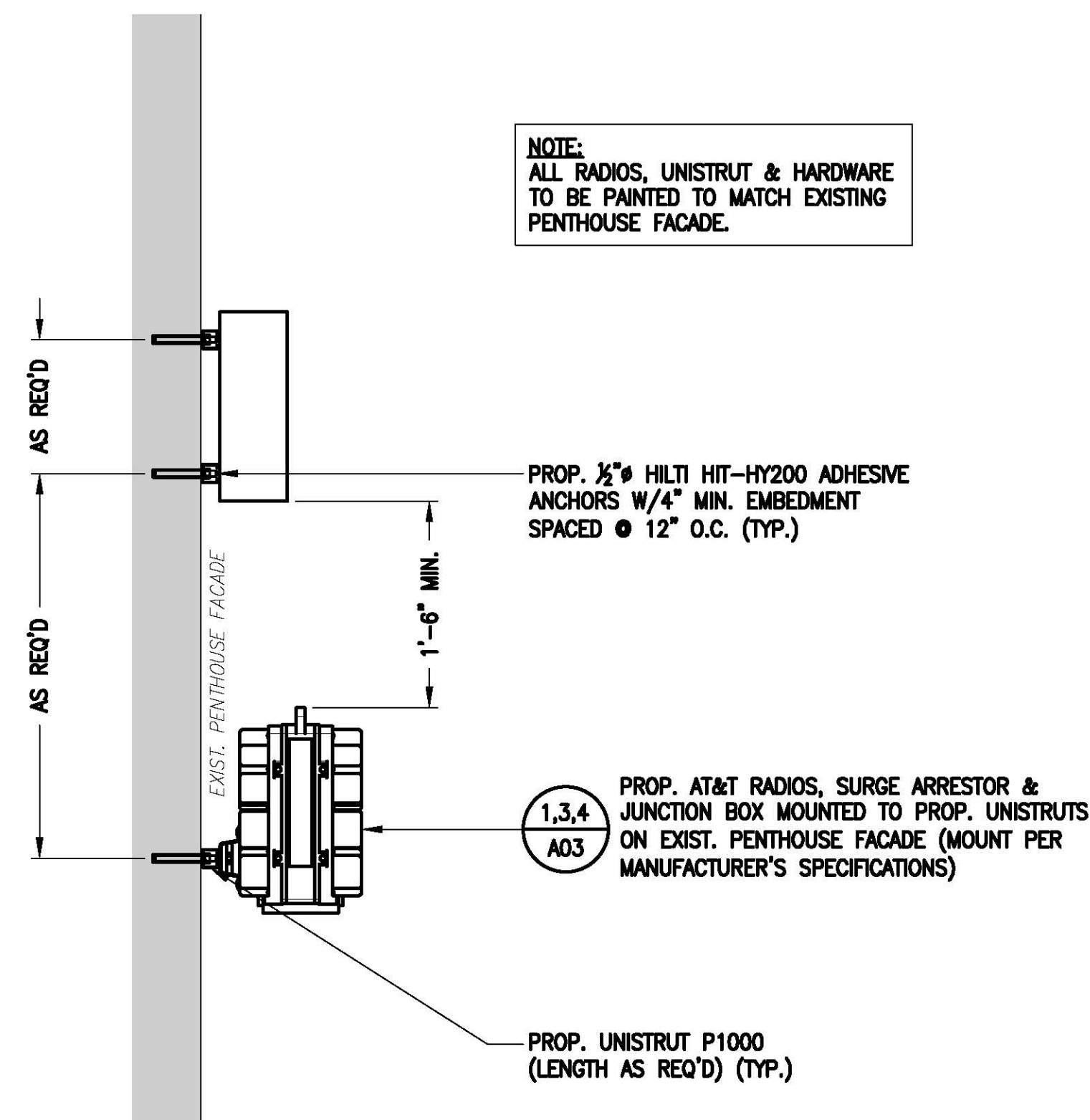


ALPHA & BETA SECTORS

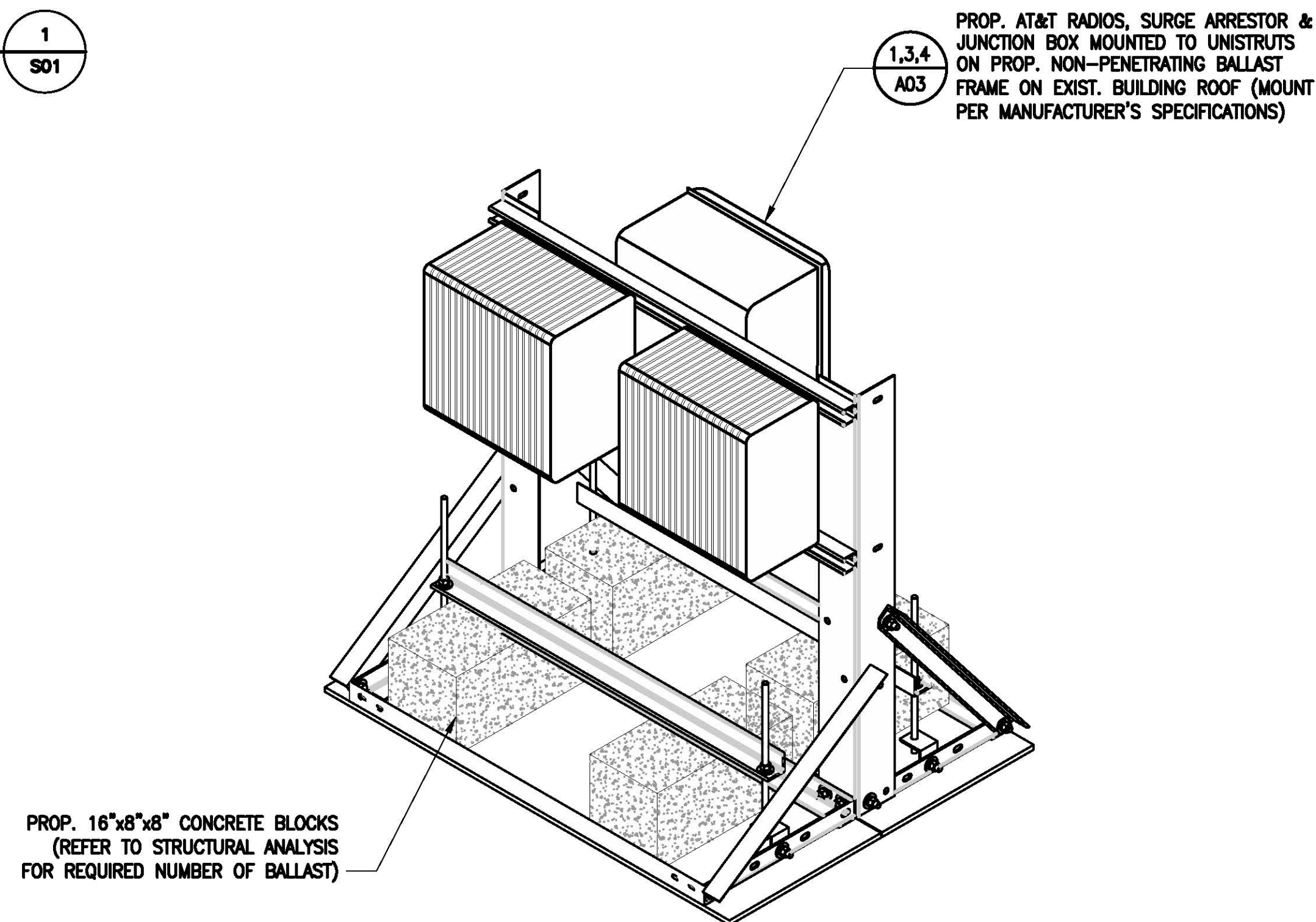


GAMMA SECTOR

ANTENNA MOUNTING DETAIL 1 S01  
SCALE: 1" = 1'-0"



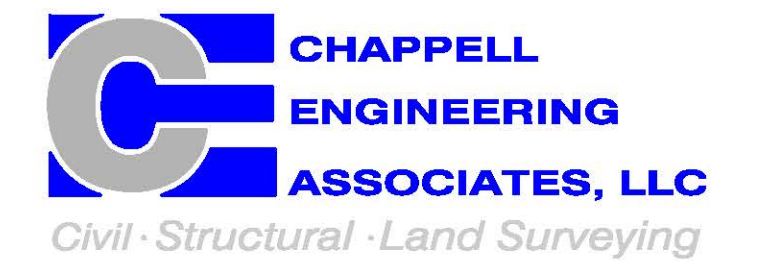
RADIO MOUNTING DETAIL 2 S01  
SCALE: 1" = 1'-0"



COMMSCOPE RR-TFS  
NON-PENETRATING BALLAST FRAME  
DIMENSIONS: 48.1"H x 42.0"W x 36.1"D  
WEIGHT (WITHOUT BALLAST): 73.9 lbs  
QUANTITY: TOTAL OF 2  
RADIO BALLAST MOUNT DETAIL 3 S01  
SCALE: N.T.S.



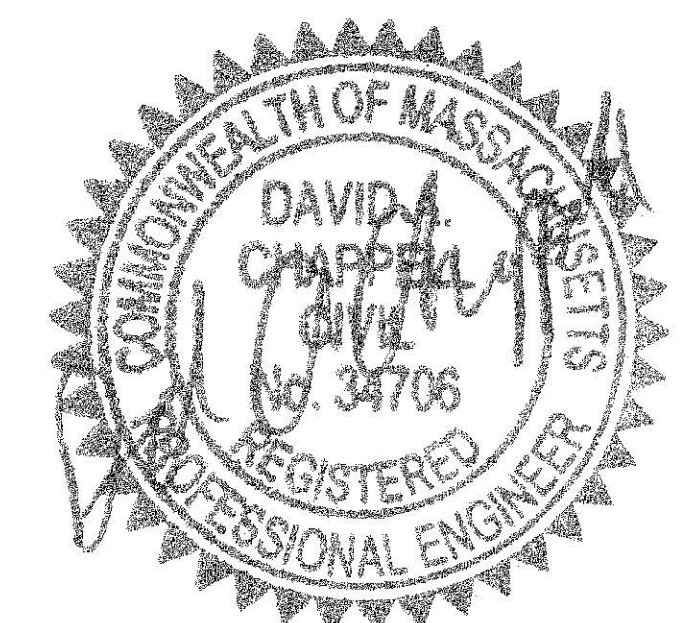
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ENGINEER/LAND SURVEYOR DATE

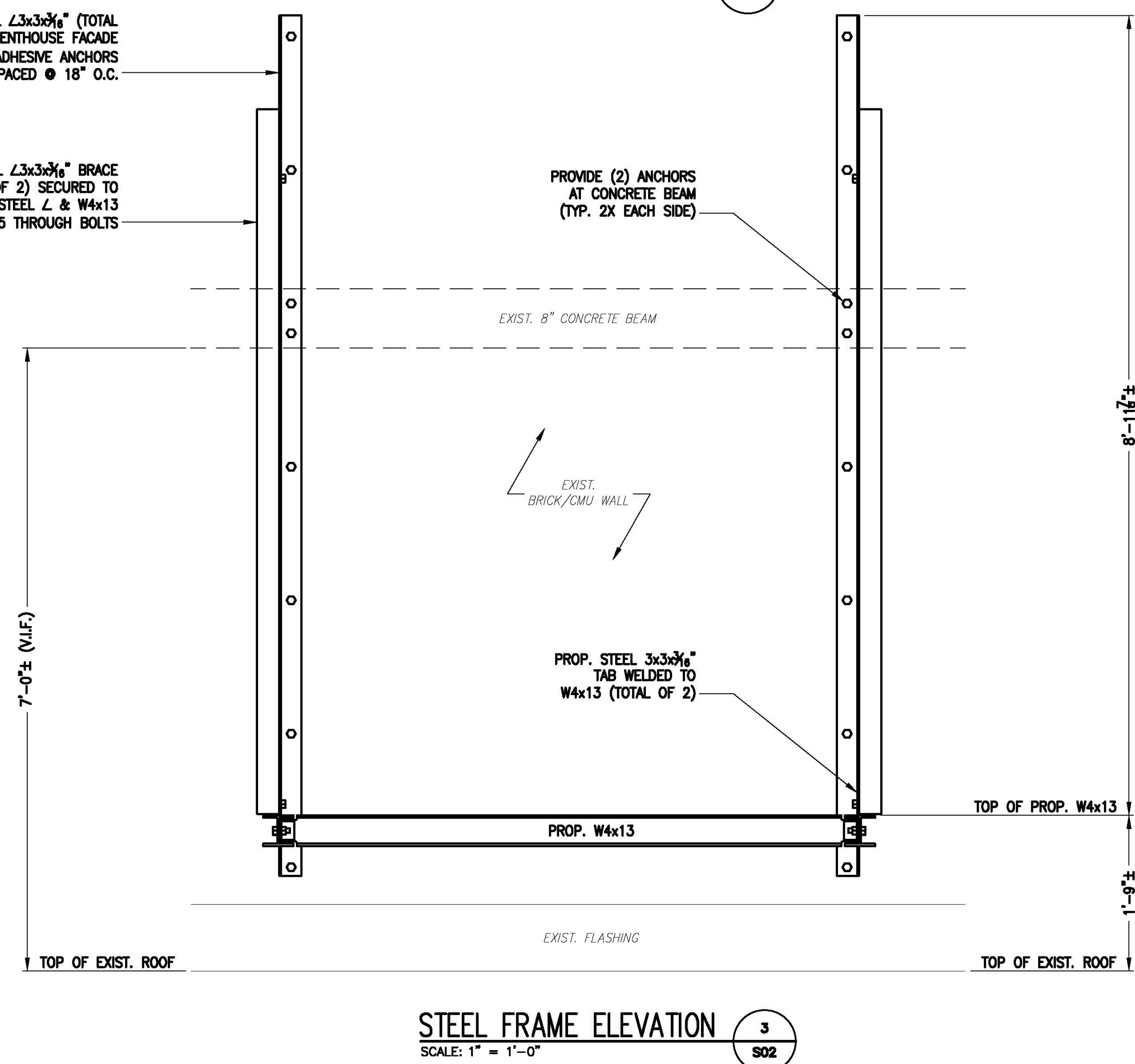
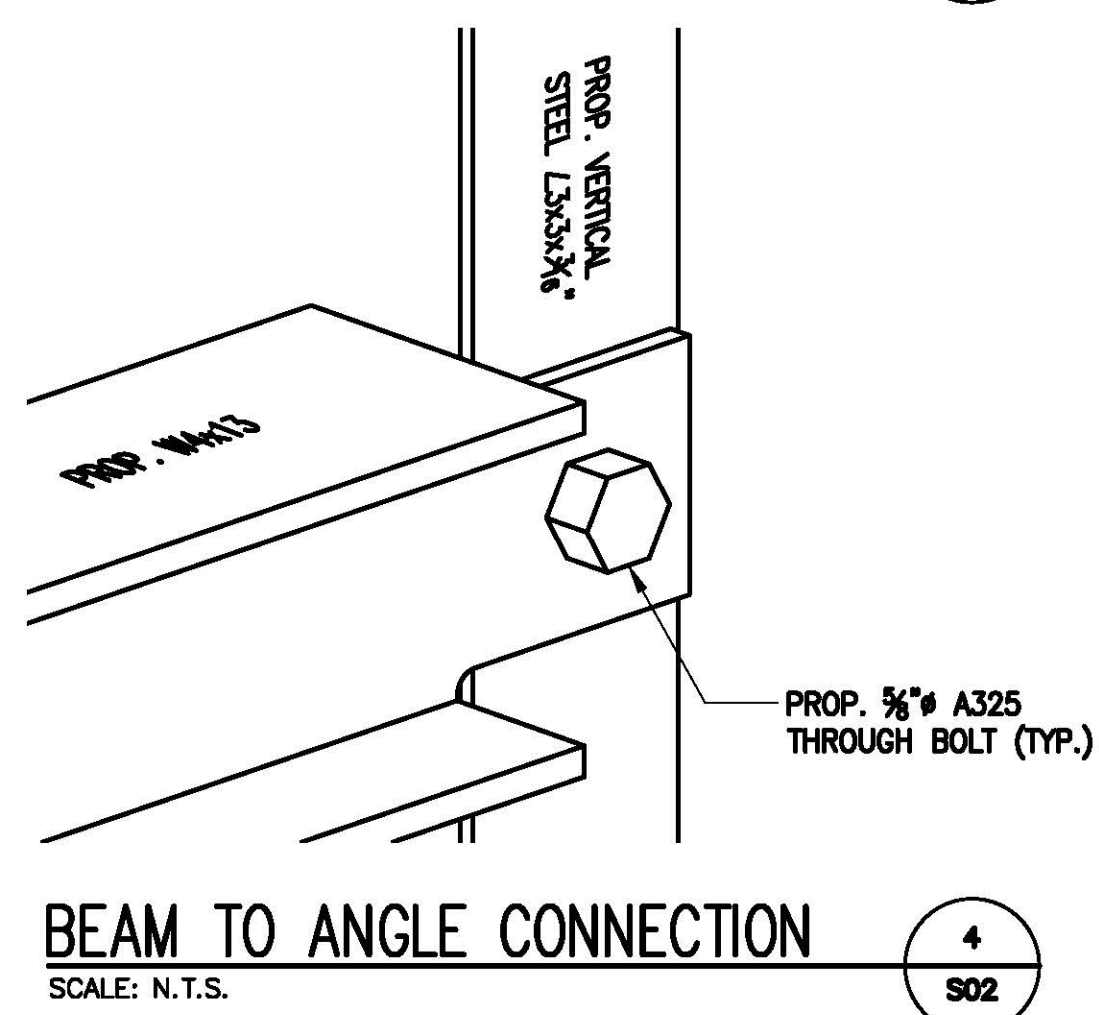
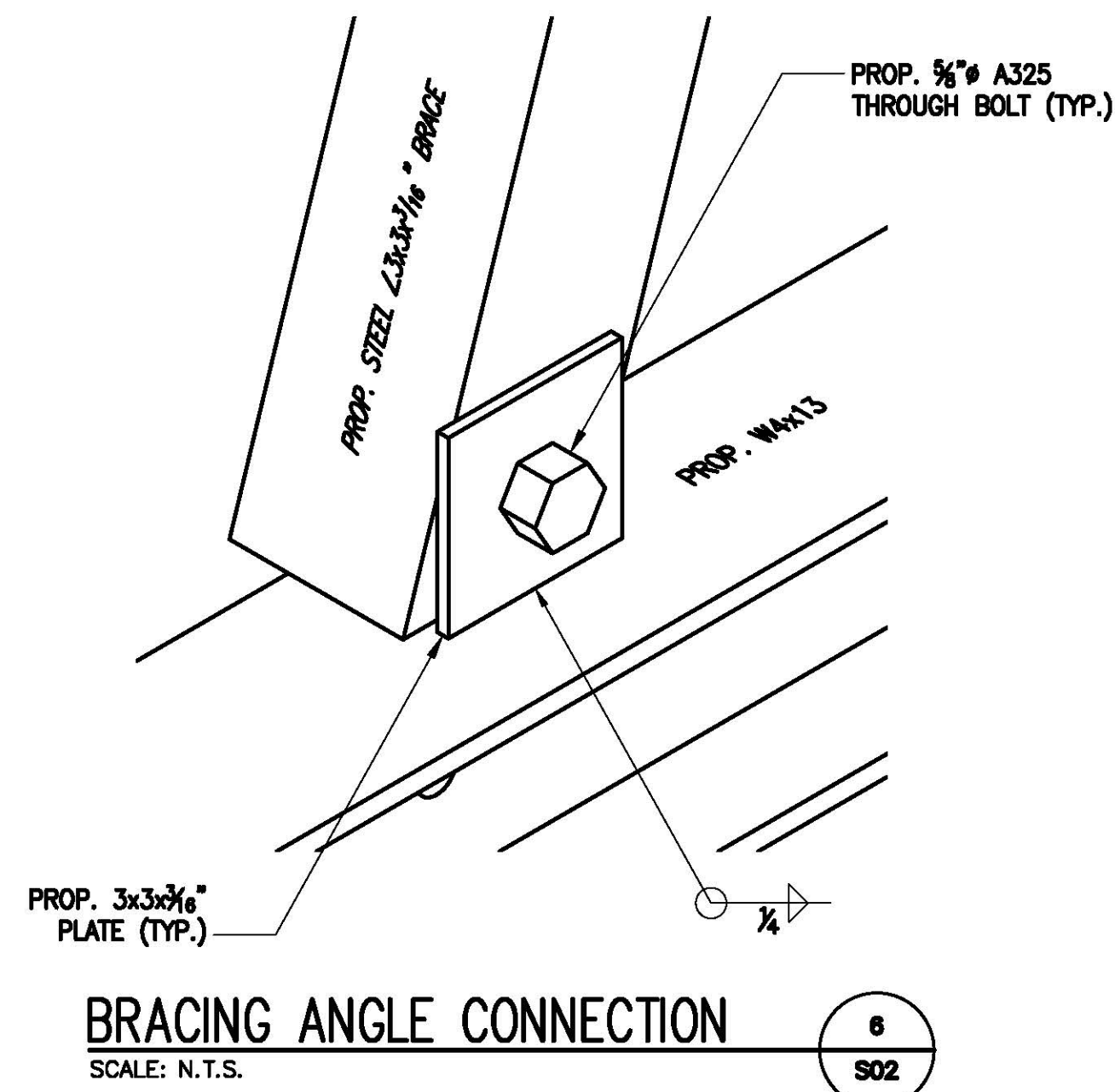
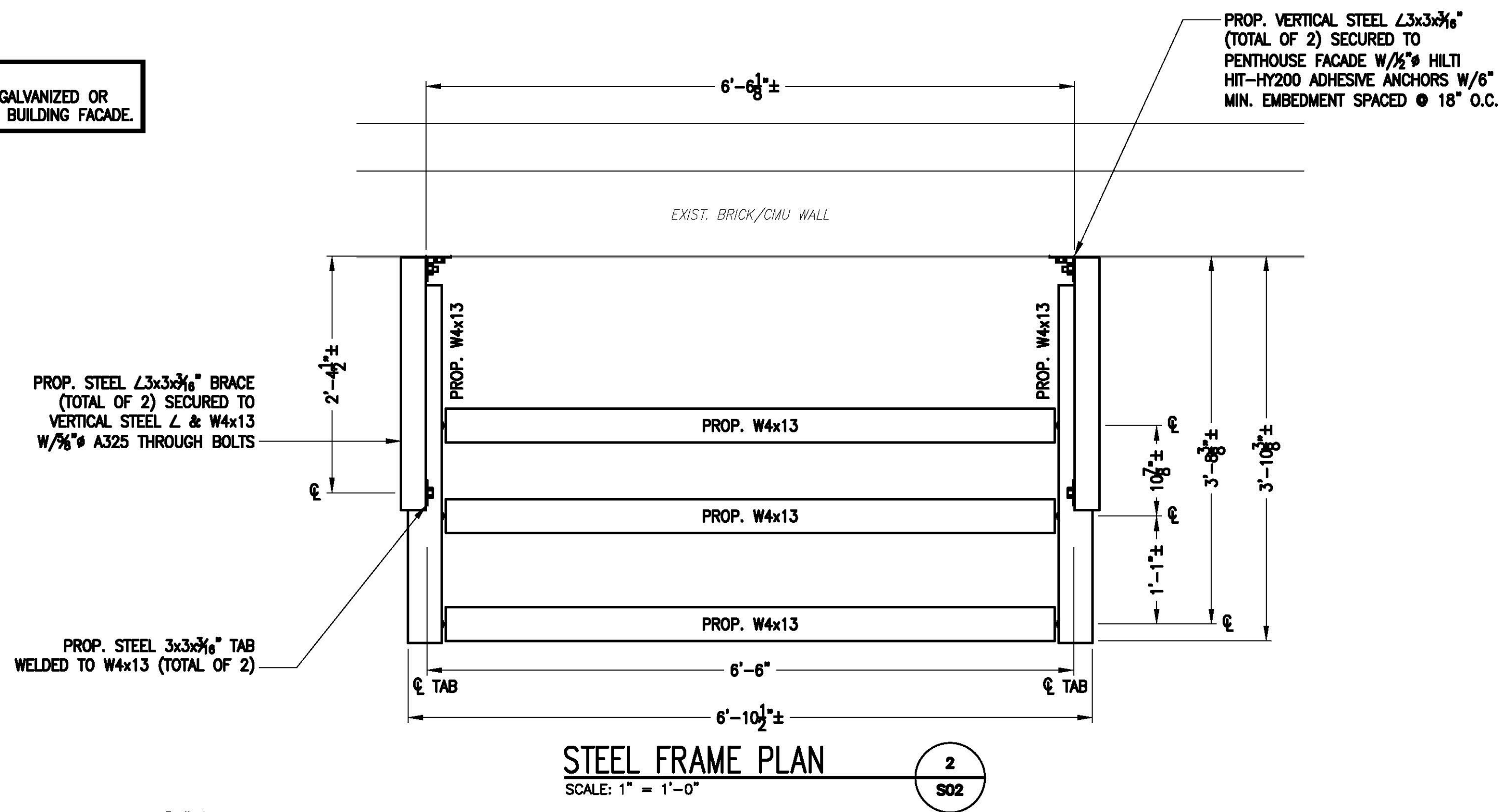
PROJECT INFORMATION:  
MAL05892  
TEMP NSB AT  
CAMBRIDGE MA  
(FA15633690) - MA5892S  
402 RINDGE AVENUE  
CAMBRIDGE, MA 02139

DRAWN BY: CMC CHECKED BY: JMT

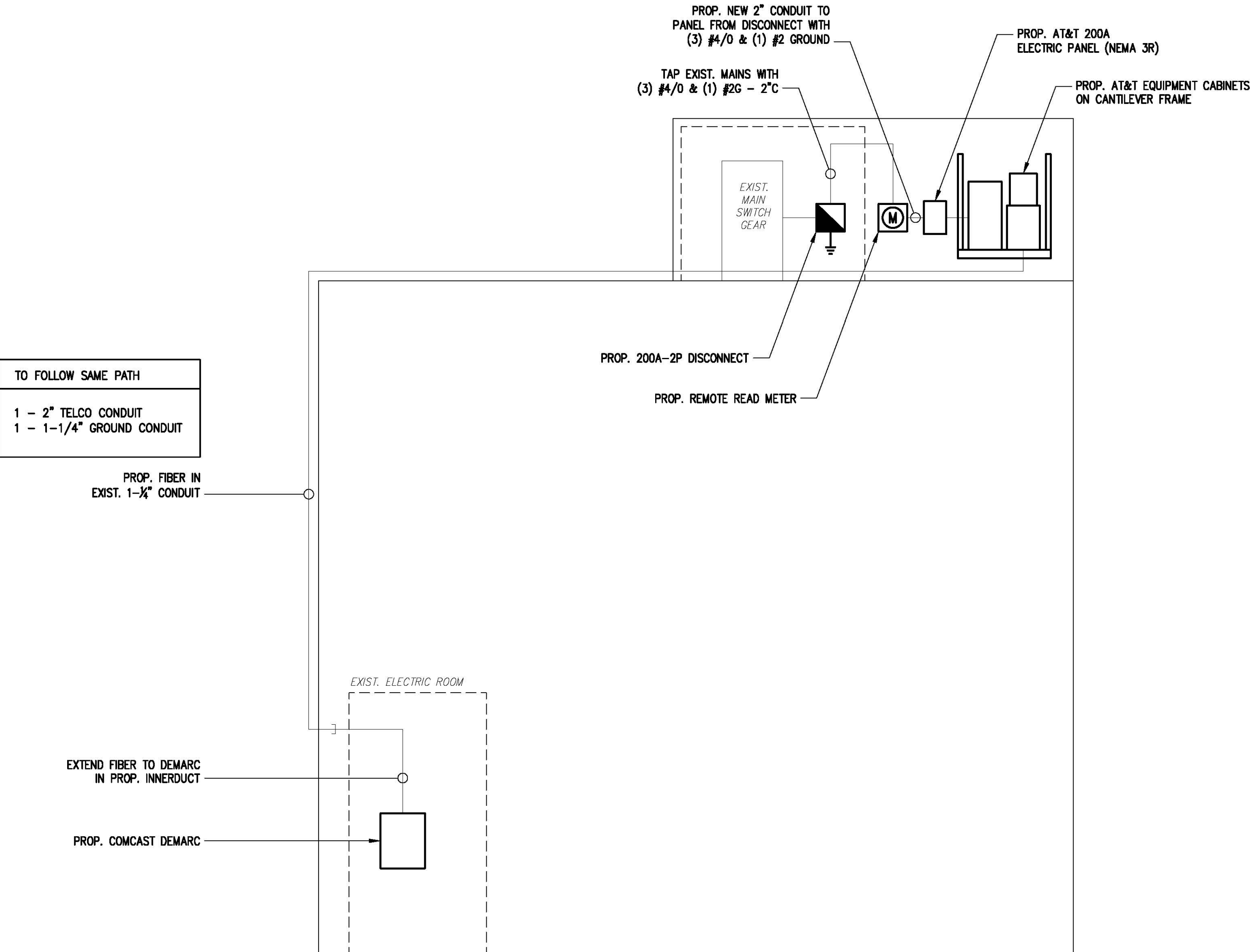
SHEET TITLE:  
ANTENNA & RADIO  
MOUNTING DETAILS

SHEET NUMBER: S01 REVISION: 2



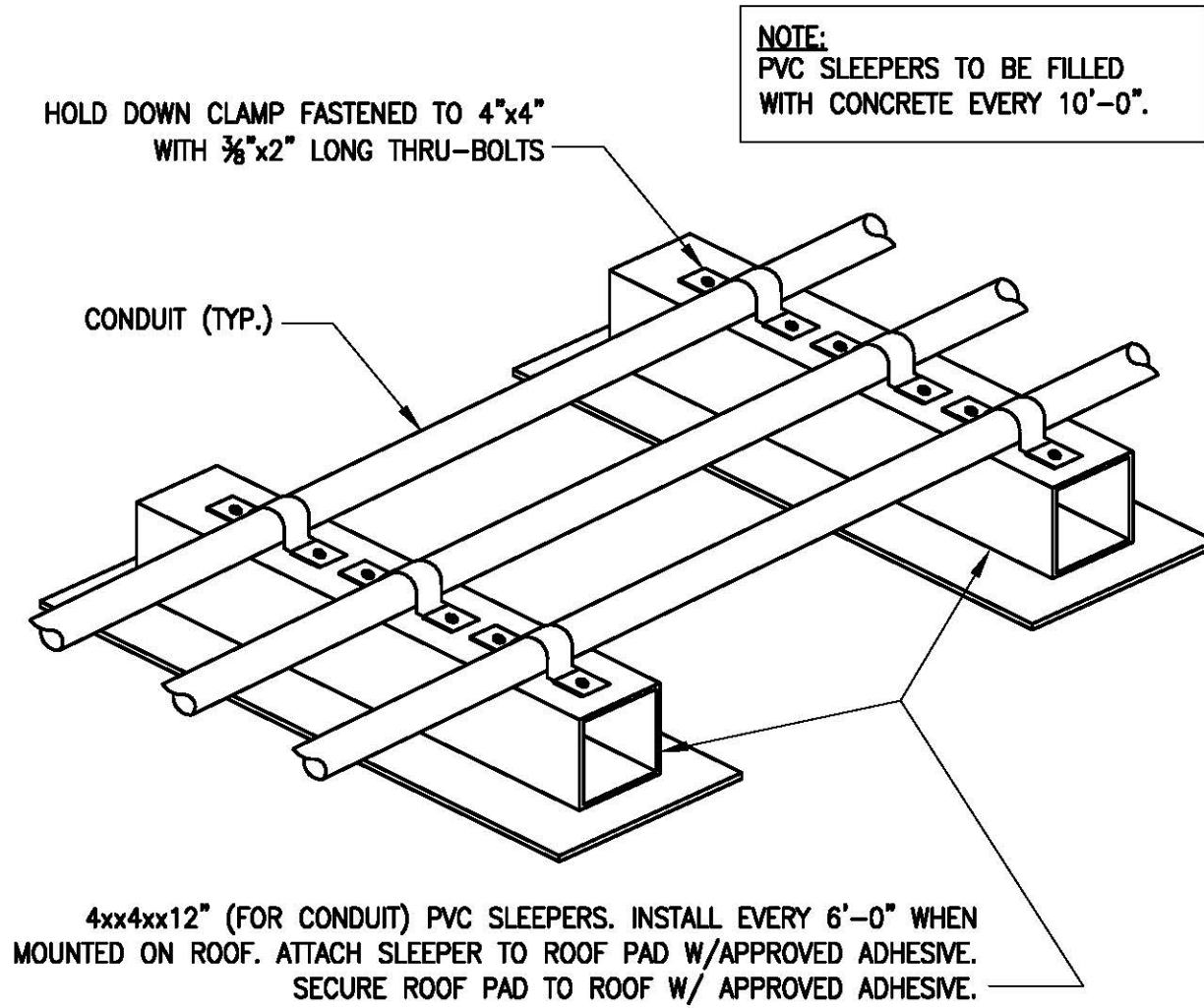






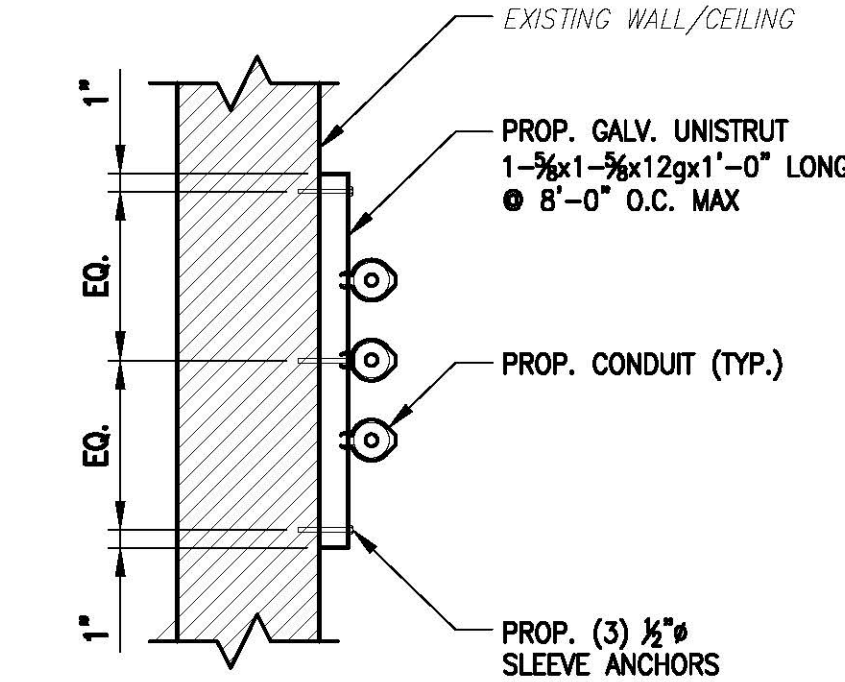
POWER AND TELCO SINGLE LINE DIAGRAM  
SCALE: N.T.S.

1  
E01



CONDUITS ON ROOFTOP

CONDUIT MOUNTING DETAIL  
SCALE: N.T.S.



CONDUITS ON WALL OR CEILING

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATIONS INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC ( AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND, USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.
11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12. PPC SUPPLIED BY PROJECT OWNER.

LEGEND:

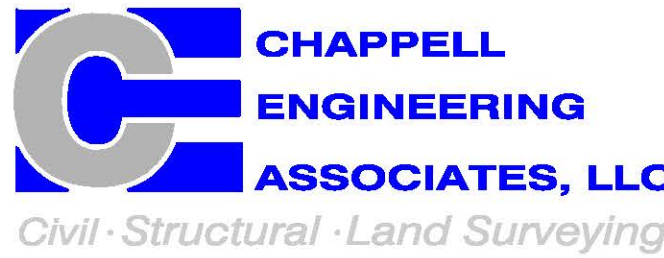
- ⊗ GROUND TEST WELL
- ⚡ GROUND ROD
- DISCONNECT SWITCH
- Ⓜ METER
- ▲ CADWELD TYPE CONNECTION
- COMPRESSION TYPE CONNECTION
- GROUNDING WIRE
- ⓧ XXX REPRESENTS DETAIL NUMBER
- ⓧ XXX REF. DRAWING NUMBER

ABBREVIATIONS:

- AWG AMERICAN WIRE GAUGE
- BCW BARE COPPER WIRE
- CGBE COAX GROUND BAR EXTERNAL
- CIGBE COAX ISOLATED GROUND BAR EXTERNAL
- DWG DRAWING
- EMT ELECTRICAL METALLIC TUBING
- MGB MASTER GROUND BAR
- PCS PERSONAL COMMUNICATION SYSTEM
- PVC RIGID (SCH. 40) POLYVINYL CHLORIDE CONDUIT
- RGS RIGID GALVANIZED STEEL
- RWY RACEWAY
- TYP TYPICAL



AT&T MOBILITY  
500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06067



R.K. EXECUTIVE CENTRE  
201 BOSTON POST ROAD WEST, SUITE 101  
MARLBOROUGH, MA 01752  
TEL: (508) 481-7400 FAX: (508) 481-7406

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REV.	DATE	REVISION DESCRIPTION
2	08-10-21	CONSTRUCTION REVISED
1	06-29-21	ISSUED FOR CONSTRUCTION
0	06-24-21	ISSUED FOR REVIEW

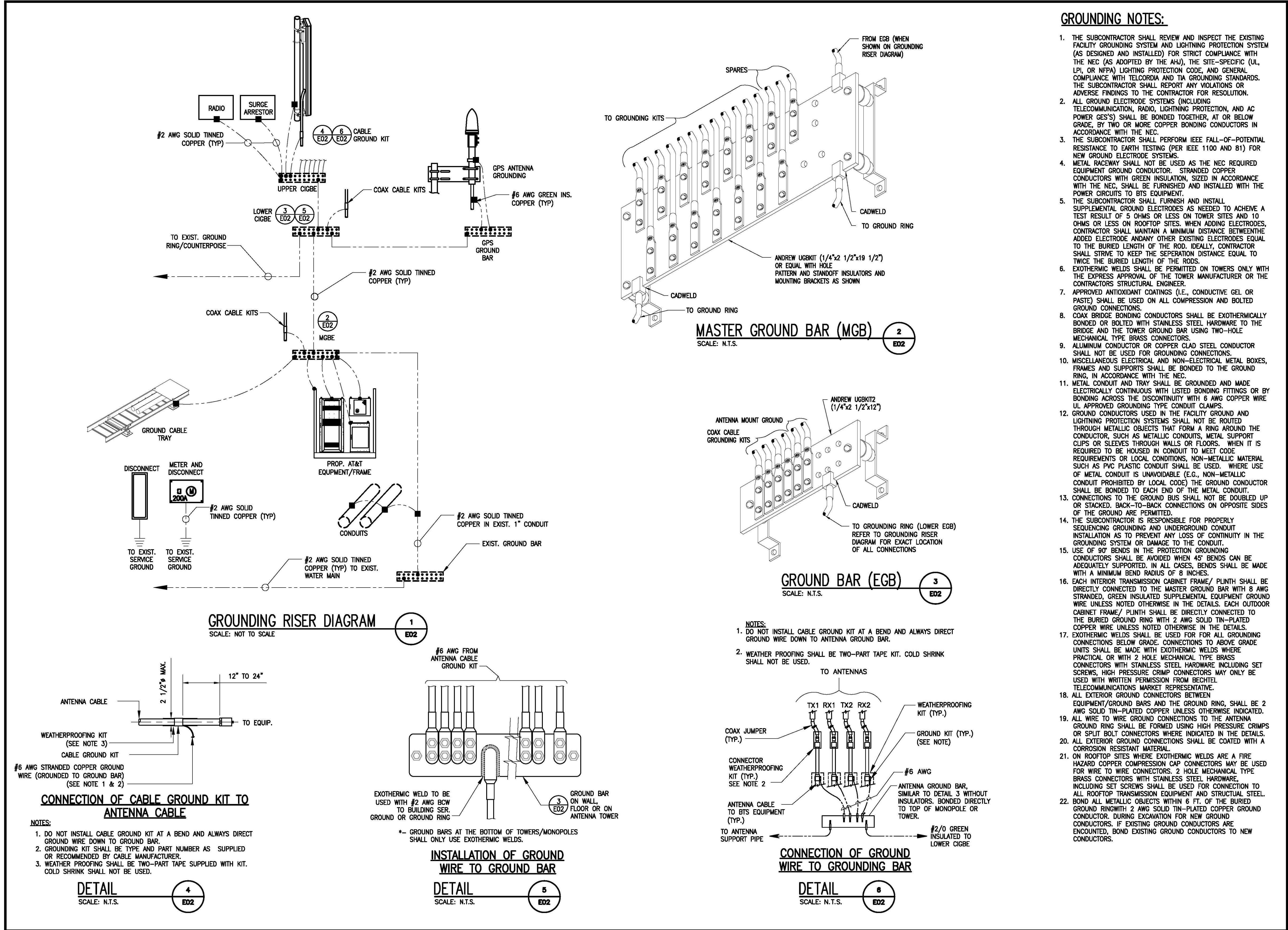


ENGINEER/LAND SURVEYOR	DATE
PROJECT INFORMATION: MAL05892 TEMP NSB AT CAMBRIDGE MA (FA15633690) - MA5892S  402 RINDGE AVENUE CAMBRIDGE, MA 02139	
DRAWN BY: CMC	CHECKED BY: JMT

SHEET TITLE:  
ELECTRICAL DIAGRAMS,  
DETAILS & NOTES

SHEET NUMBER: E01	REVISION: 2
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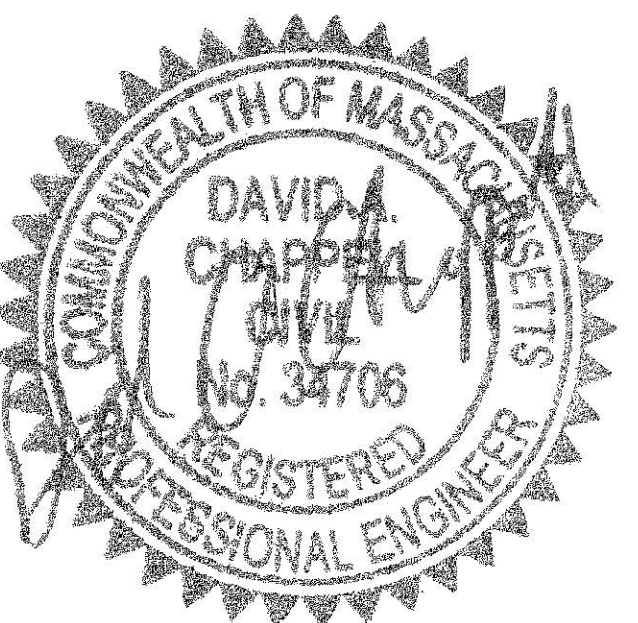
AT&T MOBILITY  
500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06067



R.K. EXECUTIVE CENTRE  
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ENGINEER/LAND SURVEYOR DATE

PROJECT INFORMATION:  
**MAL05892**  
**TEMP NSB AT**  
**CAMBRIDGE MA**  
**(FA15633690) - MA5892S**  
  
402 RINDGE AVENUE  
CAMBRIDGE, MA 02139

DRAWN BY: CMC CHECKED BY: JMT

SHEET TITLE:

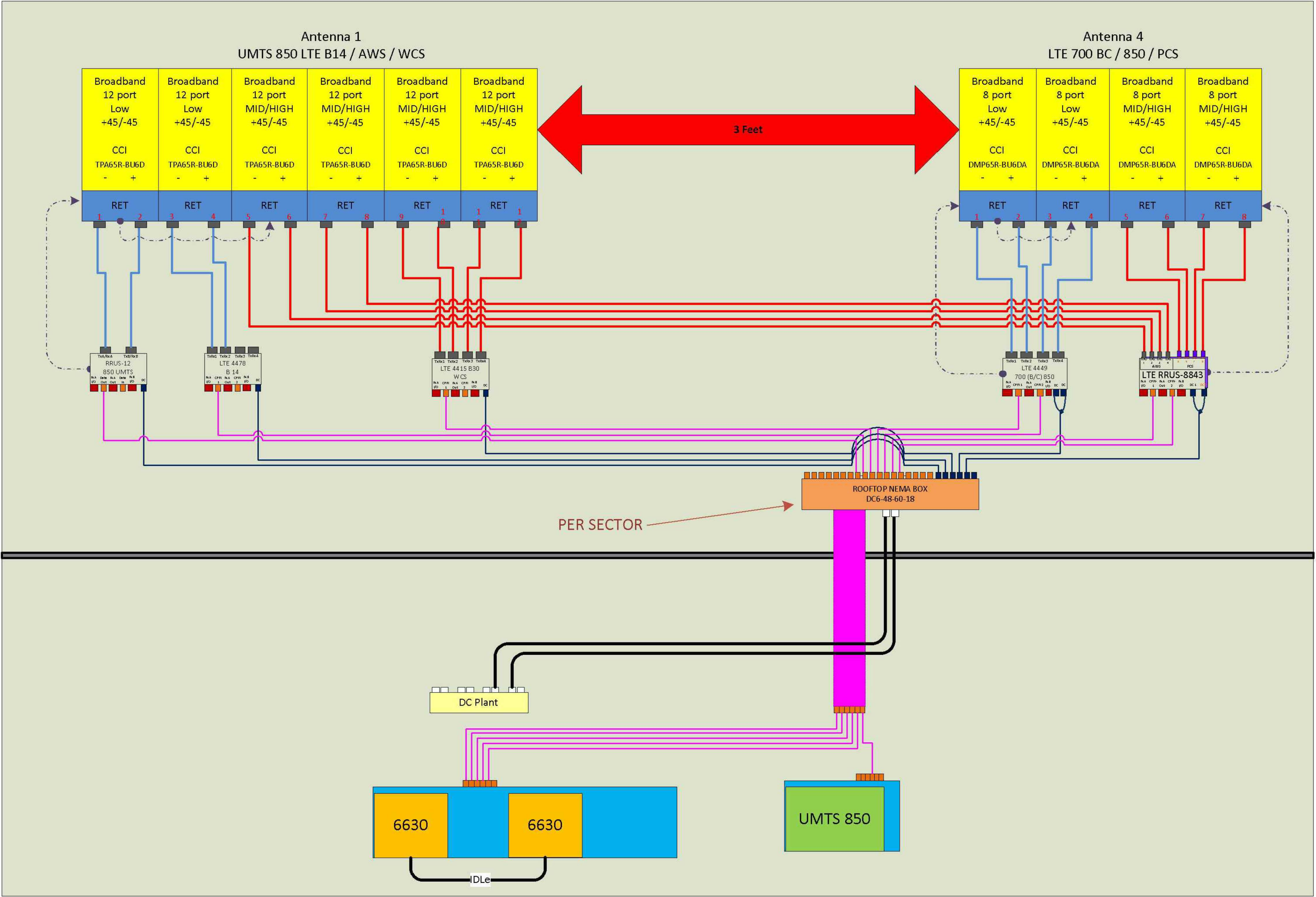
GROUNDING DIAGRAM,  
DETAILS & NOTES

SHEET NUMBER: REVISION:

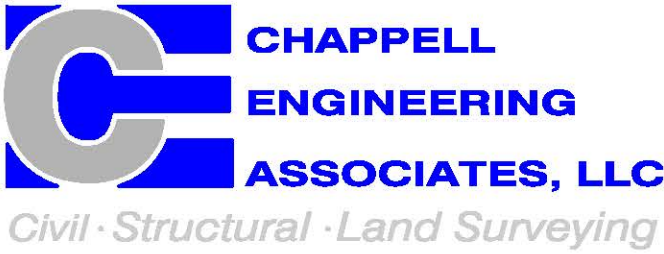
E02

2





AT&T MOBILITY  
500 ENTERPRISE DRIVE, SUITE 3A  
ROCKY HILL, CT 06067



R.K. EXECUTIVE CENTRE  
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REV.	DATE	REVISION DESCRIPTION
2	08-10-21	CONSTRUCTION REVISED
1	06-29-21	ISSUED FOR CONSTRUCTION
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ENGINEER/LAND SURVEYOR DATE

PROJECT INFORMATION:  
MAL05892  
TEMP NSB AT  
CAMBRIDGE MA  
(FA15633690) - MA5892S  
402 RINDGE AVENUE  
CAMBRIDGE, MA 02139

DRAWN BY: CMC CHECKED BY: JMT

SHEET TITLE:  
PLUMBING DIAGRAM

SHEET NUMBER: E03 REVISION: 2



August 30, 2021

**VIA FEDERAL EXPRESS**

City of Cambridge  
Board of Zoning Appeal  
831 Massachusetts Avenue  
Cambridge, MA 02139

**RE: Request of New Cingular Wireless PCS, LLC ("AT&T") for Administrative Review of an Eligible Facilities Request to Install Transmission Equipment on the existing 201' above ground level ("AGL") building (the "Building") located at 402 Rindge Avenue, Cambridge MA 02139 (Assessor's Parcel Identification Map 268B, Lot 45), pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012 (the "Spectrum Act") and Special Permit pursuant to: Article 4, Section 4.32.g.1; Article 4, Section 4.40 (Footnote 49); and Article 10, Section 10.40 of the City of Cambridge Zoning Ordinance; Massachusetts General Laws, Ch 40A, Section 9; the Telecommunications Act of 1996 (the "TCA"), and the Spectrum Act, all rights reserved.**

Dear Honorable Members of the Cambridge Board of Zoning Appeal:

On behalf of AT&T, while reserving all rights, we are pleased to submit this Eligible Facilities Request and Special Permit Application (the "Application") to the City of Cambridge Board of Zoning Appeals (the "Board") in support of AT&T's request to add Transmission Equipment on the existing Building located at 402 Rindge Avenue, Cambridge, MA 02139 (Assessor's Parcel Identification Map 268B, Lot 45) (the "Site"). Capitalized terms not defined herein shall have the same meaning as provided in the Spectrum Act and Regulations (defined below).

As noted on the attached plans (the "Plans"), the Building is owned by Rindge Tower Apartments, LLC and another wireless communications services provider (Sprint) currently has Transmission Equipment mounted on the Building, with electronic equipment also on the roof of the Building. AT&T currently has a facility on the Building as well on a temporary basis pursuant to a temporary permit which will expire in one year. AT&T's antennas are painted to match the surfaces to which they are attached. AT&T respectfully submits this Application for its equipment as a permanent facility. As depicted on the Plans, AT&T proposes to mount six (6) panel antennas (two (2) antennas per sector) on the facades of two penthouses on the roof of the Building, as well as the façade of the Building. The proposed antennas will be mounted at the antenna centerline heights of 214' AGL and 207' AGL respectively, while the building façade mounted antennas will be at the 198' AGL. AT&T will also install fifteen (15) Remote Radio Units, and three (3) surge arrestors on the roof of the Building. AT&T will install equipment on a proposed steel cantilever frame on an existing penthouse wall on the roof of the Building.



AT&T's facility (the "Facility") will include related amplifiers, cables, fiber and other associated antenna equipment, including a global positioning system antenna, all as depicted on the Plans.

AT&T's Facility will comply with all applicable terms and conditions of the Cambridge Zoning Ordinance (the "Ordinance"). As the proposed antennas of the Facility will be mounted on the facades of the Building and its existing penthouses and will be painted to match the portion of the Building to which they are mounted, there will be no undue adverse impacts upon historic resources, scenic views, residential property values or man-made resources and the aesthetic qualities of the City of are preserved. The Facility will be passive in nature and will not generate unreasonable noise, odors, smoke, waste, or significant amounts of traffic. This is an unmanned facility and will not have negative effects upon adjoining lots. The Facility will comply with all applicable federal, state and local laws, regulations and guidelines, including applicable radio frequency emissions standards.

AT&T, while reserving all rights, respectfully requests, to the extent necessary, that a special permit be granted so that the antennas may be installed consistent with the Plans submitted herewith.

### **ELIGIBLE FACILITIES REQUEST**

On behalf of AT&T, while reserving all rights, we seek approval of the facility as depicted on the Plans as an Eligible Facilities Request. As you may know, Section 6409(a) of the "Spectrum Act" (copy attached) mandates that state and local governments "*may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.*" [emphasis added]. Under Section 6409(a)(2)(A)-(C), an Eligible Facilities Request is any request to modify a Tower or Base Station that involves "collocations of new Transmission Equipment," "removal," or "replacement" of Transmission Equipment.

Federal law now preempts many of the permit application requirements that the City of Cambridge may previously have required from an applicant and provides for a limited, administrative review of AT&T's Eligible Facilities Request application. This Eligible Facilities Request involves an effort to collocate, remove, modify, or replace Transmission Equipment on an existing Building used by an FCC licensed wireless carrier. The existing Building is a Structure that is 201' AGL supporting wireless Transmission Equipment. AT&T seeks administrative approval for the proposed equipment which is clearly an Eligible Facilities Request which does not substantially change the physical dimensions of the Building pursuant to Section 6409 of the Spectrum Act. AT&T proposes to mount six (6) panel antennas (two (2) antennas per sector) on the facades of two penthouses on the roof of the Building, as well as the façade of the Building. The proposed antennas will be mounted at the antenna centerline heights of 214' AGL and 207' AGL respectively, while the building façade mounted antennas will be at the 198' AGL. AT&T will also install fifteen (15) Remote Radio Units, and three (3) surge arrestors on the roof of the Building. AT&T will install equipment on a proposed steel cantilever



frame on an existing penthouse wall on the roof of the Building. AT&T's Facility will include related amplifiers, cables, fiber and other associated antenna equipment, including a global positioning system antenna, all as depicted on the Plans submitted herewith.

The equipment identified on the Plans submitted as part of this Eligible Facilities Request application that will be collocated is Transmission Equipment pursuant to the FCC definition. The FCC has defined Transmission Equipment as "any equipment that facilitates transmission for any Commission-licensed or authorized wireless communication service, including, but not limited to, radio transceivers, antennas and other relevant equipment associated with and necessary to their operation, including coaxial or fiber-optic cable, and regular and back-up power supply. This definition includes equipment used in any technological configuration associated with any Commission-authorized wireless transmission, licensed or unlicensed, terrestrial or satellite, including commercial mobile, private mobile, broadcast and public safety services, as well as fixed wireless services such as microwave backhaul or fixed broadband."

As you may also know, the FCC adopted a Report and Order, In re: Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, FCC Docket No.13-238, Report and Order No. 14-153 (October 17, 2014) Final Rule codified at 47 CFR Parts 1 and 17 promulgating regulations (the "Regulations") interpreting and implementing the provisions of the Spectrum Act, which Regulations became effective on April 8, 2015 (with certain provisions effective on May 18, 2015). The Regulations determined that any modification to a Base Station, that meets the following six criteria does not substantially change the physical dimensions of the existing Building and, therefore, is an Eligible Facilities Request which must be granted:

1. The modifications do not increase the height of the Building by more than ten feet (10') from an existing antenna array or ten percent (10%), whichever is greater.
2. The modifications do not protrude from the edge of the Building by more than six feet (6').
3. The modifications do not involve the installation of more than the standard number of equipment cabinets for the technology involved, not to exceed four.
4. The modifications do not entail any excavation or deployment outside of the Site.
5. The modifications do not defeat any existing concealment elements of the Base Station.
6. The modifications comply with prior conditions of approval of the Base Station, unless the non-compliance is due to an increase in height, increase in width, addition of equipment cabinets, or new excavation that does not exceed the corresponding "substantial change" thresholds in numbers 1-4 above.





As evidenced on the Plans, this Eligible Facilities Request satisfies each of the six review criteria enumerated by the FCC in the Regulations. In accordance with the Spectrum Act and the Regulations, AT&T's proposed equipment will not increase the height of the Building nor protrude from the edge of the Building by more than six feet (6'). AT&T does not propose excavating outside of the Site and is not adding more than the standard number of equipment cabinets. Lastly, AT&T's proposed equipment will not defeat any concealment elements because the antennas will be mounted in a similar fashion as the existing antennas and will be painted to match the portions of the Building to which they are attached. AT&T's Transmission Equipment at the Building contained in this Eligible Facilities Request fully conforms to Section 6409(a) of the Spectrum Act.

While the Ordinance may provide that a special permit or other zoning relief is required for modifications and colocations, such a discretionary process is contrary to the guidance issued by the FCC in its Public Notice (the "Public Notice") dated January 25, 2013 and the Massachusetts Office of the Attorney General (the "Attorney General") in response letters to municipalities granting approvals of bylaw amendments.

In its Public Notice, the FCC determined that the relevant government entity may require the filing of an application for "administrative approval" only. Additionally, pursuant to Section 1.40001(c)(1) of the Regulations, "when an applicant asserts in writing that a request for a modification is covered by this section, a State or local government may require the applicant to provide documentation or information only to the extent reasonably related to determining whether the request meets the requirements of this section." The Regulations provide that applicants are not required to justify a need for the facility. Further, the Regulations also require that local governmental approvals must be granted for eligible facilities requests within 60 days of the date that the application is submitted. Clearly, this review may not be subject to a discretionary special permit process with the associated public hearing and appeal period provisions. Likewise, the Attorney General has issued a number of letters to municipalities reflecting that same opinion and warning municipalities that such qualifying requests under Section 6409 cannot be subject to a discretionary special permit process. We are confident that you will agree that AT&T's proposed equipment does not substantially change the physical dimensions of the Eligible Support Structure or Base Station at the Site, as enumerated in the Regulations.

## **SPECIAL PERMIT**

### **10.43 Criteria.**

**Special permits will normally be granted where specific provisions of this Ordinance are met, except when particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be to the detriment of the public interest because:**



- (a) **It appears that requirements of this Ordinance cannot or will not be met, or**

AT&T's Facility will comply with all applicable sections of the Ordinance as the replacement antennas will be mounted in substantially the same manner as the existing antennas on the Building, will not increase the height of the Building, and will be painted to match the color of the Building surface to which they are attached.

- (b) **traffic generated or patterns of access or egress would cause congestion, hazard, or substantial change in established neighborhood character, or**

AT&T's Facility will not result in any substantial change in the character of the neighborhood as there will be no significant increase in the amount of traffic to and from the Site, or any changes to existing patterns of access or egress to the Site. Trips to and from the Facility will average one or two per month by maintenance personnel who will park their SUV in the existing parking area on Site and not on the street.

- (c) **the continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use, or**

The continued operation of or the development of adjacent uses will not be adversely affected by AT&T's equipment because AT&T's Facility will be a passive use and will not produce any smoke, odors, waste, glare, dust, or unreasonable amounts of traffic.

- (d) **nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the citizens of the City, or**

AT&T's Facility will not result in any nuisance or hazard to the detriment of the health, safety, or welfare of the citizens of the City because AT&T's facility will be a passive use and will not produce any smoke, odors, waste, glare, dust, or unreasonable amounts of traffic. As evidenced by the MPE Study submitted herewith, AT&T's Facility will comply with all applicable regulations and guidelines pertaining to radio frequency emissions.

- (e) **for other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of this Ordinance, and**



The proposed Facility will be in harmony with the purposes of the Ordinance because by collocating a wireless facility on an existing Building in a manner which does not increase the height of the Building or expand its footprint, potential visual impacts are minimized. Also, the proposed Facility will not produce any smoke, odors, waste, glare or significant amounts of traffic. The Facility will have no negative impact on natural or undeveloped areas, wildlife, flora or endangered species. Consistent with the Ordinance, the Facility will function as a wireless communications services facility within a local, regional, and national communications system. This system operates under licenses from the FCC, and AT&T is mandated and authorized to provide adequate service to the general public. The proposed Facility will comply with all applicable regulations, standards and guidelines with respect to radiofrequency emissions.

The Facility will benefit those living and working in, and traveling through, the area by providing enhanced wireless telecommunication services. The Facility will not adversely impact adjacent properties and neighborhoods as the Facility will be located on an existing Building. The collocation of the facility will not be a threat to public health, safety and welfare. In fact, Applicant submits that the facility aids in public safety by providing and improving wireless communications services to the residents, businesses, commuters, and emergency personnel utilizing wireless communications in the immediate vicinity and along the nearby roads. Consistent with the Ordinance, the Facility will function as a wireless communications services facility within a local, regional, and national communications system. This system operates under license from the FCC, and AT&T is mandated and authorized to provide adequate service to the general public. The Facility will not generate any objectionable noise, odor, fumes, glare, smoke, or dust or require additional lighting or signage. The Facility will have no negative impact on property values in the area. This is an unmanned Facility and will have minimal negative effect on the adjoining lots.

**(f) the new use or building construction is inconsistent with the Urban Design Objectives set forth in Section 19.30.**

AT&T's Facility will not be inconsistent with the Citywide Urban Design Objectives of Section 19.30 of the Ordinance because AT&T's Facility will not result in an increase in the height of the Building or any alteration of existing setbacks on the Site. AT&T's equipment will not result in any significant increase in traffic to or from the Site and will not adversely impact upon pedestrians or bicyclists and, as AT&T's Facility will continue to be unmanned, it will have no impact on parking on Site or the surrounding area. AT&T's antennas will be located on the Building in a substantially similar manner as the existing antennas on the Building and will be painted to match. AT&T's Facility will not produce any waste and noise levels on Site will not increase as a result of



AT&T's Facility, nor will there be any additional exterior lighting as a result of AT&T's Facility.

AT&T's Facility will operate using standard electric and telephone services. As the Facility will be unmanned, it will require no water or sewer services, and City infrastructure will not be overburdened.

#### **4.40 (49)(3)**

**Where it is proposed to erect such a facility in any residential zoning district, the extent to which there is a demonstrated public need for the facility at the proposed locations, the existence of alternative, functionally suitable sites in nonresidential locations, the existence of alternative, functionally suitable sites in nonresidential locations, the character of the prevailing uses in the area, and the prevalence of other, existing mechanical systems and equipment carried on or above the roof of nearby structures. The Board of Zoning Appeal shall grant a special permit to erect such a facility in a residential zoning district only upon a finding that nonresidential uses predominate in the vicinity of the proposed facility's location and that the telecommunication facility is not inconsistent with the character that does prevail in the surrounding neighborhood.**

AT&T proposes its Facility at this location to replace an existing site which is no longer available to AT&T for collocation. AT&T proposes the Facility so that it will continue to fill a significant gap in coverage and provide adequate wireless communications services coverage to this part of the City of Cambridge. The proposed Facility will be installed in a substantially similar fashion as the existing Sprint facility present on the Building. The use will be passive in nature, producing no unreasonable noise, smoke odor, waste, or glare. There will be no significant increase in the amount of traffic to and from the Site as maintenance visits will average one or two per month.

#### **THE TELECOMMUNICATIONS ACT OF 1996 - THE TCA**

The Federal TCA provides that: no laws or actions by any local government or planning or zoning board may prohibit, or have the effect of prohibiting, the placement, construction, or modification of communications towers, antennas, or other wireless facilities in any particular geographic area, see 47 U.S.C. §332(c)(7)(B)(i); local government or planning or zoning boards may not unreasonably discriminate among providers of functionally equivalent services, see 47 U.S.C. §332(c)(7)(B)(i); health concerns may not be considered so long as the emissions comply with the applicable standards of the FCC, see 47 U.S.C. §332(c)(7)(B)(iv); and, decisions must be rendered within a reasonable period of time, see 47 U.S.C. §332(c)(7)(B)(ii) and the FCC's Declaratory Ruling commonly referred to as the "Shot Clock".



## CONCLUSION

AT&T is committed to working cooperatively with the City of Cambridge, and all jurisdictions around the country, to secure expeditious approval of requests to install personal wireless service facilities. We respectfully request that the Board review AT&T's proposed Facility and determine that the installation does not "substantially change the physical dimensions of the Base Station" pursuant to Section 6409 of the Spectrum Act, or in the alternative, to the extent necessary, grant a special permit pursuant to: Article 4, Section 4.32.g.1; Article 4, Section 4.40 (Footnote 49); and Article 10, Section 10.40 of the City of Cambridge Zoning Ordinance; Massachusetts General Laws, Ch 40A, Section 9; the TCA, all rights reserved.

AT&T respectfully requests that the Board approve this Eligible Facilities Request, or in the alternative, all rights reserved, a Special Permit. Please do not hesitate to contact me should there be any questions.

Respectfully,

**BROWN RUDNICK LLP**

A handwritten signature in black ink, appearing to read 'Michael R. Dolan', is written over a horizontal line.

Michael R. Dolan, Esq.



### **ATTACHMENTS**

1. Application Form
2. Letter of Authorization – Notarized Owner Information Form
3. FCC Licenses
4. Block Map
5. Photographs
6. Plans
7. Structural Report
8. MPE Study
9. FCC Regulations
10. FCC Public Notice
11. Representative Letter from the Attorney General



**47 USC 1455**

**Middle Class Tax Relief and Job Creation Act of 2012**

**SEC. 6409. WIRELESS FACILITIES DEPLOYMENT**

**(a) FACILITY MODIFICATION.—**

(1) **IN GENERAL.**—Notwithstanding section 704 of the Telecommunications Act of 1996 (Public Law 104–104) or any other provision of law, a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.

(2) **ELIGIBLE FACILITIES REQUEST.**—For purposes this subsection, the term “eligible facilities request” means any request for modification of an existing wireless tower or base station that involves –

- (A) collocation of new transmission equipment;
- (B) removal of transmission equipment; or
- (C) replacement of transmission equipment.

(3) **APPLICABILITY OF ENVIRONMENTAL LAWS.** Nothing in paragraph (1) shall be construed to relieve the Commission from the requirements of the National Historic Preservation Act or the National Environmental Policy Act of 1969.



## **ADDENDUM "A"**

**The Regulations provide that “substantial change” means a modification that changes the physical dimensions of an eligible support structure that meets any of the following criteria. Included below are comments in bold to demonstrate that the proposed facility is NOT a substantial change.**

For Base Stations, the modification increases the height of the structure by more than 10% or more than ten (10) feet, whichever is greater;

**As depicted on the Plans, AT&T’s proposed equipment will not increase the height of the Building.**

For Base Stations, the modification involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six (6) feet;

**As depicted on the Plans, AT&T’s Transmission Equipment will not protrude from the edge of the Building more six (6) feet.**

For any eligible support structure, the modification involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets;

**As depicted on the Plans, AT&T does not propose to add four cabinets as a part of this project.**

The modification entails any excavation or deployment outside the current site;

**AT&T does not propose any excavation or deployment outside the current site.**

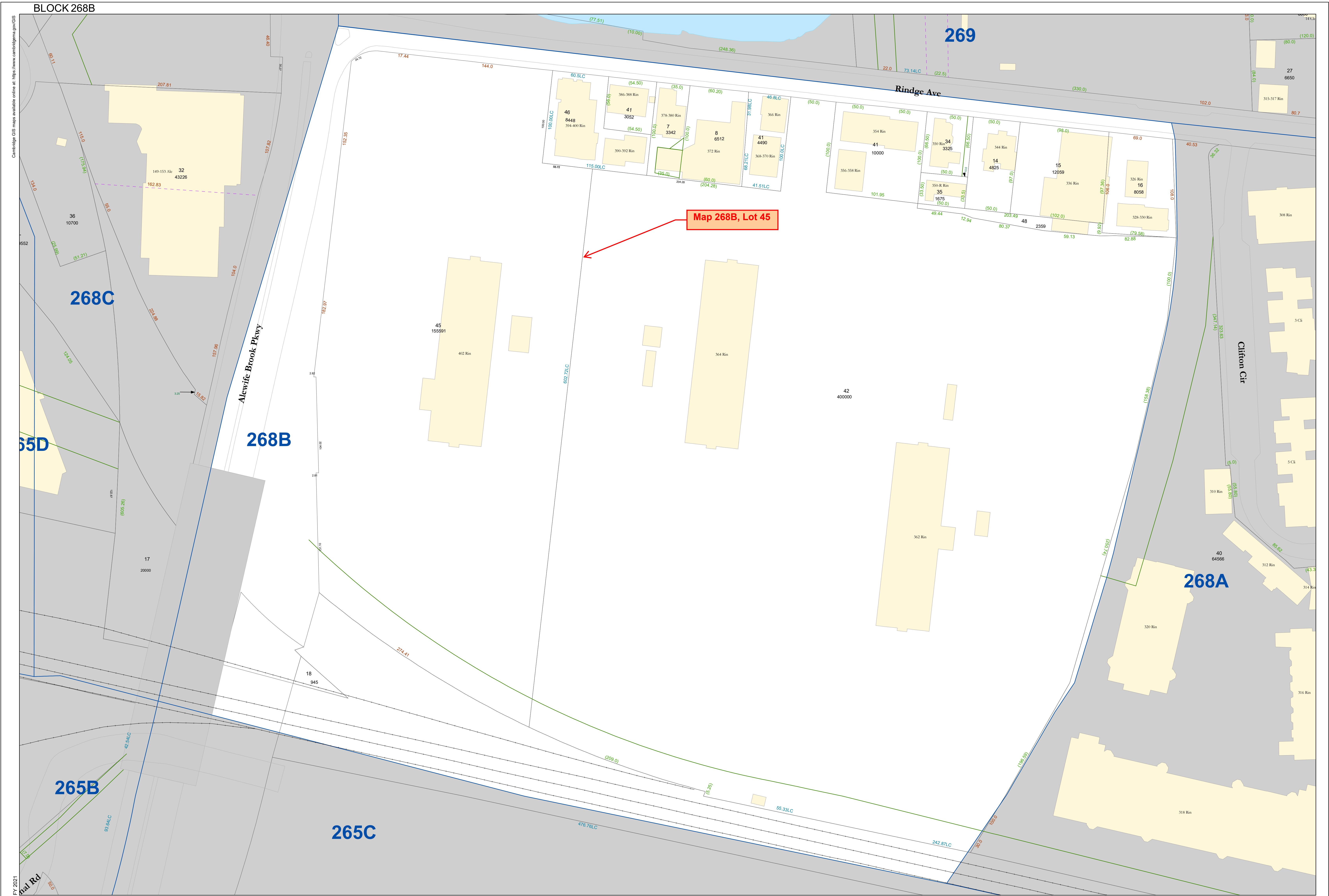
The modification would defeat the concealment elements of the tower; or


**As depicted on the Plans, AT&T’s modification will be substantially similar to the existing transmission equipment on the Building and will be painted to match.**

The modification does not comply with conditions associated with the siting approval of the construction or modification of the eligible support structure or base station equipment, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would not exceed the thresholds identified in § 1.40001(b)(7)(i) through (iv).

**AT&T is not aware of any noncompliance and respectfully asserts that the proposed modifications are consistent with all applicable terms of prior approvals for the wireless facility (see copies of special permits attached).**

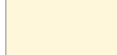
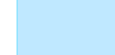





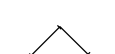






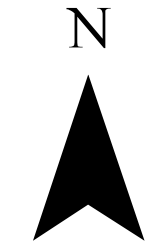
City of Cambridge  
Assessing Department

795 Massachusetts Ave.  
Cambridge, MA 02139

 Buildings	 Water	10 Lot Number	100 Parcel size in Sq. Ft.
 Lot Line	 Sub-Parcel Line	268B Block Number	44.0LC Land Court Dimension
 Block Line	 Easement	10 Cam Street Number	65.0 Survey Dimensions
 City Boundary	 Railway	(125.0) Deed Dimension	

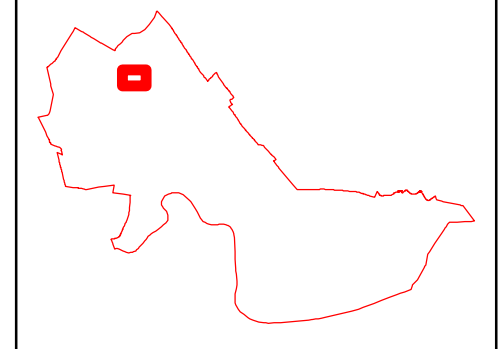
DISCLAIMER:  
All Real Property shown on this map was compiled from existing Assessor's Tax Maps dated 1920 to 2020 and maintained by the City Assessor's Office and the Department of Public Works. Subsequent maintenance has been completed using the City of Cambridge Geographic Information System (GIS). Parcels have not been created from survey, and map is suitable for assessing purposes only.

The City of Cambridge assumes no legal responsibility for information shown on this map.



0 15 30 60 Feet

1 inch = 41 feet



Parcel Block Map

# 268B



# PUBLIC NOTICE

Federal Communications Commission  
445 12<sup>th</sup> St., S.W.  
Washington, D.C. 20554

News Media Information 202 / 418-0500  
Internet: <http://www.fcc.gov>  
TTY: 1-888-835-5322

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## WIRELESS TELECOMMUNICATIONS BUREAU OFFERS GUIDANCE ON INTERPRETATION OF SECTION 6409(a) OF THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012

DA 12-2047  
January 25, 2013

On February 22, 2012, the Middle Class Tax Relief and Job Creation Act of 2012 (Tax Act)<sup>1</sup> became law. Section 6409(a) of the Tax Act provides that a state or local government “may not deny, and shall approve” any request for collocation, removal, or replacement of transmission equipment on an existing wireless tower or base station, provided this action does not substantially change the physical dimensions of the tower or base station.<sup>2</sup> The full text of Section 6409(a) is reproduced in the Appendix to this Public Notice.

To date, the Commission has not received any formal petition to interpret or apply the provisions of Section 6409(a). We also are unaware of any judicial precedent interpreting or applying its terms. The Wireless Telecommunications Bureau has, however, received informal inquiries from service providers, facilities owners, and state and local governments seeking guidance as to how Section 6409(a) should be applied. In order to assist interested parties, this Public Notice summarizes the Bureau’s understanding of Section 6409(a) in response to several of the most frequently asked questions.<sup>3</sup>

### What does it mean to “substantially change the physical dimensions” of a tower or base station?

Section 6409(a) does not define what constitutes a “substantial[] change” in the dimensions of a tower or base station. In a similar context, under the *Nationwide Collocation Agreement* with the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers, the Commission has applied a four-prong test to determine whether a collocation will effect a “substantial increase in the size of [a] tower.”<sup>4</sup> A proposed collocation that does not involve a substantial increase in

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<sup>1</sup> Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, H.R. 3630, 126 Stat. 156 (enacted Feb. 22, 2012) (Tax Act).

<sup>2</sup> *Id.*, § 6409(a).

<sup>3</sup> Although we offer this interpretive guidance to assist parties in understanding their obligations under Section 6409(a), *see, e.g., Truckers United for Safety v. Federal Highway Administration*, 139 F.3d 934 (D.C.Cir. 1998), the Commission remains free to exercise its discretion to interpret Section 6409(a) either by exercising its rulemaking authority or through adjudication. With two exceptions not relevant here, the Tax Act expressly grants the Commission authority to “implement and enforce” this and other provisions of Title VI of that Act “as if this title is a part of the Communications Act of 1934 (47 U.S.C. 151 et seq.).” Tax Act § 6003.

<sup>4</sup> 47 C.F.R. Part 1, App. B, *Nationwide Programmatic Agreement for the Collocation of Wireless Antennas*, § I.C (*Nationwide Collocation Agreement*).

size is ordinarily excluded from the Commission's required historic preservation review under Section 106 of the National Historic Preservation Act (NHPA).<sup>5</sup> The Commission later adopted the same definition in the *2009 Declaratory Ruling* to determine whether an application will be treated as a collocation when applying Section 332(c)(7) of the Communications Act of 1934.<sup>6</sup> The Commission has also applied a similar definition to determine whether a modification of an existing registered tower requires public notice for purposes of environmental review.<sup>7</sup>

Under Section I.C of the *Nationwide Collocation Agreement*, a "substantial increase in the size of the tower" occurs if:

- 1) [t]he mounting of the proposed antenna on the tower would increase the existing height of the tower by more than 10%, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to avoid interference with existing antennas; or
- 2) [t]he mounting of the proposed antenna would involve the installation of more than the standard number of new equipment cabinets for the technology involved, not to exceed four, or more than one new equipment shelter; or
- 3) [t]he mounting of the proposed antenna would involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable; or
- 4) [t]he mounting of the proposed antenna would involve excavation outside the current tower site, defined as the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site.

Although Congress did not adopt the Commission's terminology of "substantial increase in size" in Section 6409(a), we believe that the policy reasons for excluding from Section 6409(a) collocations that substantially change the physical dimensions of a structure are closely analogous to those that animated the Commission in the *Nationwide Collocation Agreement* and subsequent proceedings. In light of the Commission's prior findings, the Bureau believes it is appropriate to look to the existing definition of "substantial increase in size" to determine whether the collocation, removal, or replacement of equipment

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<sup>5</sup> See 16 U.S.C. § 470f, *see also* 47 C.F.R. § 1.1307(a)(4) (requiring applicants to determine whether proposed facilities may affect properties that are listed, or are eligible for listing, in the National Register of Historic Places).

<sup>6</sup> See Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance, WT Docket No. 08-165, *Declaratory Ruling*, 24 FCC Rcd. 13994, 14012, para. 46 & n.146 (2009) (*2009 Declaratory Ruling*), *recon. denied*, 25 FCC Rcd. 11157 (2010), *pet. for review denied sub nom. City of Arlington, Texas v. FCC*, 668 F.3d 229 (5<sup>th</sup> Cir.), *cert. granted*, 113 S.Ct. 524 (2012); 47 U.S.C. § 332(c)(7).

<sup>7</sup> See 47 C.F.R. § 17.4(c)(1)(B); National Environmental Policy Act Compliance for Proposed Tower Registrations, WT Docket No. 08-61, *Order on Remand*, 26 FCC Rcd. 16700, 16720-21, para. 53 (2011).

on a wireless tower or base station substantially changes the physical dimensions of the underlying structure within the meaning of Section 6409(a).

### **What is a “wireless tower or base station”?**

A “tower” is defined in the *Nationwide Collocation Agreement* as “any structure built for the sole or primary purpose of supporting FCC-licensed antennas and their associated facilities.”<sup>8</sup> The Commission has described a “base station” as consisting of “radio transceivers, antennas, coaxial cable, a regular and backup power supply, and other associated electronics.”<sup>9</sup> Section 6409(a) applies to the collocation, removal, or replacement of equipment on a wireless tower or base station. In this context, we believe it is reasonable to interpret a “base station” to include a structure that currently supports or houses an antenna, transceiver, or other associated equipment that constitutes part of a base station.<sup>10</sup> Moreover, given the absence of any limiting statutory language, we believe a “base station” encompasses such equipment in any technological configuration, including distributed antenna systems and small cells.

Section 6409(a) by its terms applies to any “wireless” tower or base station. By contrast, the scope of Section 332(c)(7) extends only to facilities used for “personal wireless services” as defined in that section.<sup>11</sup> Given Congress’s decision not to use the pre-existing definition from another statutory provision relating to wireless siting, we believe the scope of a “wireless” tower or base station under Section 6409(a) is not intended to be limited to facilities that support “personal wireless services” under Section 332(c)(7).

### **May a state or local government require an application for an action covered under Section 6409(a)?**

Section 6409(a) states that a state or local government “may not deny, and shall approve, any eligible facilities request....” It does not say that a state or local government may not require an application to be filed. The provision that a state or local government must approve and may not deny a request to take a covered action, in the Bureau’s view, implies that the relevant government entity may require the filing of an application for administrative approval.

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<sup>8</sup> See *Nationwide Collocation Agreement*, § I.B.

<sup>9</sup> See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, WT Docket No. 10-133, *Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, Fifteenth Report*, 26 FCC Rcd. 9664, 9481, para. 308 (2011).

<sup>10</sup> See also 47 C.F.R. Part 1, App. C, *Nationwide Programmatic Agreement Regarding the Section 106 National Historic Preservation Act Review Process*, § II.A.14 (defining “tower” to include “the on-site fencing, equipment, switches, wiring, cabling, power sources, shelters, or cabinets associated with that Tower but not installed as part of an Antenna as defined herein”).

<sup>11</sup> 47 U.S.C. § 332(c)(7)(A). “Personal wireless services” is in turn defined to mean “commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services.” *Id.* § 332(c)(7)(C)(1).

**Is there a time limit within which an application must be approved?**

Section 6409(a) does not specify any period of time for approving an application. However, the statute clearly contemplates an administrative process that invariably ends in approval of a covered application. We believe the time period for processing these applications should be commensurate with the nature of the review.

In the *2009 Declaratory Ruling*, the Commission found that 90 days is a presumptively reasonable period of time to process collocation applications.<sup>12</sup> In light of the requirement of Section 6409(a) that the reviewing authority “may not deny, and shall approve” a covered request, we believe that 90 days should be the maximum presumptively reasonable period of time for reviewing such applications, whether for “personal wireless services” or other wireless facilities.

Wireless Telecommunications Bureau contact: Maria Kirby at (202) 418-1476 or by email: [Maria.Kirby@fcc.gov](mailto:Maria.Kirby@fcc.gov).

-FCC-

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<sup>12</sup> See *2009 Declaratory Ruling*, 24 FCC Rcd. at 14012-13, paras. 46-47.

## **APPENDIX**

### **SEC. 6409. WIRELESS FACILITIES DEPLOYMENT.**

#### **(a) FACILITY MODIFICATIONS.**

(1) **IN GENERAL.** Notwithstanding section 704 of the Telecommunications Act of 1996 (Public Law 104–104) or any other provision of law, a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station.

(2) **ELIGIBLE FACILITIES REQUEST.** For purposes of this subsection, the term “eligible facilities request” means any request for modification of an existing wireless tower or base station that involves —

- (A) collocation of new transmission equipment;
- (B) removal of transmission equipment; or
- (C) replacement of transmission equipment.

(3) **APPLICABILITY OF ENVIRONMENTAL LAWS.** Nothing in paragraph (1) shall be construed to relieve the Commission from the requirements of the National Historic Preservation Act or the National Environmental Policy Act of 1969.



## **Subpart CC—State and Local Review of Applications for Wireless Service Facility Modification**

### **§1.40001 Wireless Facility Modifications.**

**(a) Purpose.** These rules implement section 6409 of the Spectrum Act (codified at 47 U.S.C. 1455), which requires a State or local government to approve any eligible facilities request for a modification of an existing tower or base station that does not substantially change the physical dimensions of such tower or base station.

**(b) Definitions.** Terms used in this section have the following meanings.

**(1) Base station.** A structure or equipment at a fixed location that enables Commission-licensed or authorized wireless communications between user equipment and a communications network. The term does not encompass a tower as defined in this subpart or any equipment associated with a tower.

(i) The term includes, but is not limited to, equipment associated with wireless communications services such as private, broadcast, and public safety services, as well as unlicensed wireless services and fixed wireless services such as microwave backhaul.

(ii) The term includes, but is not limited to, radio transceivers, antennas, coaxial or fiber-optic cable, regular and backup power supplies, and comparable equipment, regardless of technological configuration (including Distributed Antenna Systems and small-cell networks).

(iii) The term includes any structure other than a tower that, at the time the relevant application is filed with the State or local government under this section, supports or houses equipment described in paragraphs (b)(1)(i) through (ii) of this section that has been reviewed and approved under the applicable zoning or siting process, or under another State or local regulatory review process, even if the structure was not built for the sole or primary purpose of providing such support.

(iv) The term does not include any structure that, at the time the relevant application is filed with the State or local government under this section, does not support or house equipment described in paragraphs (b)(1)(i)-(ii) of this section.

**(2) Collocation.** The mounting or installation of transmission equipment on an eligible support structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes.

**(3) Eligible facilities request.** Any request for modification of an existing tower or base station that does not substantially change the physical dimensions of such tower or base station, involving:

- (i) Collocation of new transmission equipment;
- (ii) Removal of transmission equipment; or



(iii) Replacement of transmission equipment.

**(4) Eligible support structure.** Any tower or base station as defined in this section, provided that it is existing at the time the relevant application is filed with the State or local government under this section.

**(5) Existing.** A constructed tower or base station is existing for purposes of this section if it has been reviewed and approved under the applicable zoning or siting process, or under another State or local regulatory review process, provided that a tower that has not been reviewed and approved because it was not in a zoned area when it was built, but was lawfully constructed, is existing for purposes of this definition.

**(6) Site.** For towers other than towers in the public rights-of-way, the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site, and, for other eligible support structures, further restricted to that area in proximity to the structure and to other transmission equipment already deployed on the ground.

**(7) Substantial change.** A modification substantially changes the physical dimensions of an eligible support structure if it meets any of the following criteria:

(i) For towers other than towers in the public rights-of-way, it increases the height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater; for other eligible support structures, it increases the height of the structure by more than 10% or more than ten feet, whichever is greater;

(A) Changes in height should be measured from the original support structure in cases where deployments are or will be separated horizontally, such as on buildings' rooftops; in other circumstances, changes in height should be measured from the dimensions of the tower or base station, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act.

(ii) For towers other than towers in the public rights-of-way, it involves adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater; for other eligible support structures, it involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six feet;

(iii) For any eligible support structure, it involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets; or, for towers in the public rights-of-way and base stations, it involves installation of any new equipment cabinets on the ground if there are no pre-existing ground cabinets associated with the structure, or else involves installation of ground cabinets that are more than 10% larger in height or overall volume than any other ground cabinets associated with the structure;

(iv) It entails any excavation or deployment outside the current site;

(v) It would defeat the concealment elements of the eligible support structure; or

(vi) It does not comply with conditions associated with the siting approval of the construction or modification of the eligible support structure or base station equipment, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would not exceed the thresholds identified in §1.40001(b)(7)(i) through (iv).

**(8) Transmission equipment.** Equipment that facilitates transmission for any Commission-licensed or authorized wireless communication service, including, but not limited to, radio transceivers, antennas, coaxial or fiber-optic cable, and regular and backup power supply. The term includes equipment associated with wireless communications services including, but not limited to, private, broadcast, and public safety services, as well as unlicensed wireless services and fixed wireless services such as microwave backhaul.

**(9) Tower.** Any structure built for the sole or primary purpose of supporting any Commission-licensed or authorized antennas and their associated facilities, including structures that are constructed for wireless communications services including, but not limited to, private, broadcast, and public safety services, as well as unlicensed wireless services and fixed wireless services such as microwave backhaul, and the associated site.

**(c) Review of applications.** A State or local government may not deny and shall approve any eligible facilities request for modification of an eligible support structure that does not substantially change the physical dimensions of such structure.

**(1) Documentation requirement for review.** When an applicant asserts in writing that a request for modification is covered by this section, a State or local government may require the applicant to provide documentation or information only to the extent reasonably related to determining whether the request meets the requirements of this section. A State or local government may not require an applicant to submit any other documentation, including but not limited to documentation intended to illustrate the need for such wireless facilities or to justify the business decision to modify such wireless facilities.

**(2) Timeframe for review.** Within 60 days of the date on which an applicant submits a request seeking approval under this section, the State or local government shall approve the application unless it determines that the application is not covered by this section.

**(3) Tolling of the timeframe for review.** The 60-day period begins to run when the application is filed, and may be tolled only by mutual agreement or in cases where the reviewing State or local government determines that the application is incomplete. The timeframe for review is not tolled by a moratorium on the review of applications.

(i) To toll the timeframe for incompleteness, the reviewing State or local government must provide written notice to the applicant within 30 days of receipt of the application, clearly and

specifically delineating all missing documents or information. Such delineated information is limited to documents or information meeting the standard under paragraph (c)(1) of this section.

(ii) The timeframe for review begins running again when the applicant makes a supplemental submission in response to the State or local government's notice of incompleteness.

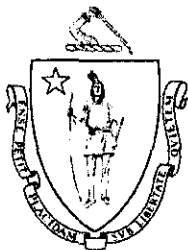
(iii) Following a supplemental submission, the State or local government will have 10 days to notify the applicant that the supplemental submission did not provide the information identified in the original notice delineating missing information. The timeframe is tolled in the case of second or subsequent notices pursuant to the procedures identified in this paragraph (c)(3). Second or subsequent notices of incompleteness may not specify missing documents or information that were not delineated in the original notice of incompleteness.

**(4) Failure to act.** In the event the reviewing State or local government fails to approve or deny a request seeking approval under this section within the timeframe for review (accounting for any tolling), the request shall be deemed granted. The deemed grant does not become effective until the applicant notifies the applicable reviewing authority in writing after the review period has expired (accounting for any tolling) that the application has been deemed granted.

**(5) Remedies.** Applicants and reviewing authorities may bring claims related to Section 6409(a) to any court of competent jurisdiction.

[80 FR 1269, Jan. 8, 2015]

62266034 v1-WorkSiteUS-024519/0782



THE COMMONWEALTH OF MASSACHUSETTS  
OFFICE OF THE ATTORNEY GENERAL

CENTRAL MASSACHUSETTS DIVISION

10 MECHANIC STREET, SUITE 301

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February 17, 2015

Dorothy A. Powers, Town Clerk  
Town of Westwood  
580 High Street  
Westwood, MA 02090

**RE: Westwood Special Town Meeting of November 17, 2014 - Case # 7455**  
**Warrant Articles # 11, 12, 13, 14, 15 and 16 (Zoning)**  
**Warrant Article # 7, 17 and 18 (General)**

Dear Ms. Powers:

**Articles 7 and 18** – We take no action on Articles 7 and 18 because they are votes to accept the provisions of local option statutes. Such votes do not require review and approval by the Attorney General.

**Article 14** – We retain Article 14 (Street Access Special Permit) for further review and will issue our decision by our deadline of March 9, 2015.

**Articles 11, 12, 13, 15, 16, and 17** – We approve these Articles from the November 17, 2014 Westwood Special Town Meeting. Our comments on Article 13 are detailed below.

**Article 13** – Article 13 amends Section 7.3 of the Town's Zoning Bylaw, "Environmental Impact and Design Review." In part the amendments make the EIDR by-law applicable to the "construction, installation or alteration of a Minor Wireless Communication Facility pursuant Section 9.4 of [the zoning] bylaw."

Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012 requires that "[A] state or local government *may not deny, and shall approve*, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." (emphasis added). The Act defines "eligible facilities request" as any request for modification of an existing wireless tower or base station that involves: 1) collocation of new transmission equipment; 2) removal of transmission equipment; or 3) replacement of transmission equipment. The Act applies "[n]otwithstanding section 704 of the Telecommunications Act of 1996." The Act's requirement that a local government "may not deny, and shall approve, any eligible facilities request" means that a request for modification to an existing facility that does not substantially change the physical dimensions of the tower or base station must be approved. Such qualifying requests also cannot

be subject to a discretionary special permit. The Town must apply the EIDR by-law consistent with these requirements.

Article 13 also amends Section 7.3.3, "Exempt Uses" to clarify the application of the EIDR by-law to protected uses under G.L. c. 40A, Section 3, as follows (emphasis supplied):

In cases where M.G.L. Chapter 40A, Section 3 provides certain exemptions from zoning restrictions for uses protected thereunder, review and approval pursuant to this Section shall be limited consistent with those statutory provisions and on other matters shall be advisory only. For all uses exempt under M.G.L. Chapter 40A, Section 3, the Planning Board shall make determinations of compliance with dimensional and parking requirements of this Bylaw, including requirements related to setbacks, building height, building coverage, **impervious surface**, parking and circulation, buffers, **screening, landscaping, lighting, and stormwater management**.

This text must be applied consistent with the protections given to agricultural, religious, educational, child care, and solar energy systems under G.L. c. 40A, § 3.

First, G.L. c. 40A, § 3 requires that, to the extent the use of land or structures constitutes commercial agriculture, the Town cannot require a special permit for, unreasonably regulate, or prohibit such activities: (1) on land zoned for agriculture; (2) on land that is greater than five acres in size; and (3) on land of 2 acres or more if the sale of products from the agricultural use generates \$1,000 per acre or more of gross sales. We urge the Town to consult closely with Town Counsel when applying the new text in the EIDR by-law to agricultural uses to ensure that the Town complies with G.L. c. 40A, § 3.

Second, for religious, educational, and child care uses, G.L. c. 40A, § 3 allows the Town to impose only reasonable regulations in eight areas: the bulk and height of structures, yard size, lot area, setbacks, open space, parking and building coverage requirements. Nothing in G.L. c. 40A, § 3 allows the Town to impose requirements regarding impervious surface, screening, landscaping, lighting, and stormwater management on religious, educational, and child care uses. Because the text in underline and bold above conflicts with the G.L. c. 40A, § 3 protections for religious, educational, and child care uses, the Town cannot apply this text to such uses. We urge the Town to consult closely with Town Counsel when applying the new text in the EIDR by-law to religious, educational, and child care uses to ensure that the Town complies with G.L. c. 40A, § 3.<sup>1</sup>

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<sup>1</sup> During the course of our review we received correspondence from a Town resident urging us to disapprove the amendment to Section 7.3.3 on the basis that the EIDR is in reality special permit review process, and thus violates G.L. c. 40A, § 3. We appreciate this correspondence and it has aided us in our review. However, we are unable to conclude that the EIDR is in reality a special permit requirement, and cannot disapprove the text under the Attorney General's standard of review of by-laws under G.L. c. 40, § 32.

**Note:** Pursuant to G.L. c. 40, § 32, neither general nor zoning by-laws take effect unless the Town has first satisfied the posting/publishing requirements of that statute. Once this statutory duty is fulfilled, (1) general by-laws and amendments take effect on the date these posting and publishing requirements are satisfied unless a later effective date is prescribed in the by-law, and (2) zoning by-laws and amendments are deemed to have taken effect from the date they were approved by the Town Meeting, unless a later effective date is prescribed in the by-law.

MAURA HEALEY  
ATTORNEY GENERAL

*Margaret J. Hurley*

by: Margaret J. Hurley, Assistant Attorney General  
Chief, Central Massachusetts Division  
Director, Municipal Law Unit  
Ten Mechanic Street, Suite 301  
Worcester, MA 01608  
(508) 792-7600 x 4402

cc: Town Counsel Thomas P. McCusker

June 28, 2021

Just a Start Corporation  
1035 Cambridge St #12  
Cambridge, MA 02141

Rindge Tower Apartments  
402 Rindge Avenue  
Cambridge, MA 02140


**Re: Letter of Authorization to File Permit Applications for AT&T's  
Proposed Telecommunications Facility at 402 Rindge Avenue,  
Cambridge, MA 02140 (MA5892\_15630860)**

To Whom It May Concern:

New Cingular Wireless PCS, LLC ("AT&T") is currently proposing installing a new equipment facility on the rooftop at the above-referenced address. As part of this installation, they are required to obtain certain local permits and approvals for this work. As the Landlord of the property, permission is hereby granted to AT&T and its agents, including Centerline Communications, for the purpose of consummating any applications necessary to gain the required approvals or permits on the above-referenced structure at 402 Rindge Avenue in Cambridge, MA 02140.

Any fees or charges associated with all applications or permits and any conditions placed on the Applicant shall be the responsibility of AT&T, its subsidiaries and agents.

Sincerely,

By:  (signature)  
Name: Noah Sawyer  
Title: Authorized Agent, Rindge Tower Apartments LLC  
Date: 6/28/21





550 Cochituate Road  
Suite 13  
Framingham, MA 01701

**STRUCTURAL ANALYSIS**  
**RINDGE AVE - SITE No. MA5892**



Address:  
402 RINDGE AVENUE  
**CAMBRIDGE, MA 02139**



Date:  
**June 25, 2021**



June 25, 2021

Mr. Peter Lamontagne  
Centerline Communications  
750 West Center Street, Suite 301  
West Bridgewater, MA 02379

Reference: AT&T Site: MA5892  
Rindge Avenue  
402 Rindge Avenue  
Cambridge, MA 02139

Dear Mr. Lamontagne:

Chappell Engineering Associates, LLC has performed a structural analysis of the proposed wall-mount cantilever equipment frame to support the proposed equipment cabinet and battery cabinet at the above-referenced location. AT&T proposes to install panel antennas on the face of the existing building and locate equipment cabinets on the roof of the existing building.

**Existing Conditions:**

The existing building is a 22-story residential structure with poured concrete 2-way slab/column structural system. The proposed AT&T equipment cabinets, panel antennas and remote radio units are part of an integrated telecommunications facility servicing RF transmission and receptor antennas located on the roof of the existing building.

**Proposed Work:**

AT&T proposes to install a total of six (6) panel antennas on the face of the existing structure (2 antennas per sector, total of 3 sectors). Additional ancillary equipment consisting of Remote Radios and Surge Arrestors are being proposed to be installed on the roof of the existing building adjacent to the proposed antennas. A wall-mounted cantilevered equipment frame is being proposed to support the radio equipment cabinets, consisting of one (1) Vertiv Netsure 512 DC power unit with integrated batteries and a stacked arrangement of one (1) Purcell FLX12-2820 Power and equipment enclosure, and one (1) Purcell FLX21-2520 outdoor cabinet. Photos of the proposed equipment locations are included in this analysis for reference.

A rooftop cable tray will carry the proposed fiber trunk cables and DC power cables to the proposed antennas and remote radios located at each of the 3 antennas sectors.

Based upon our analysis of the proposed AT&T installation, the information obtained in the existing building drawings, and the magnitude of the anticipated loads, **we consider the existing structure adequate to support the proposed AT&T installation as shown on our construction drawings.**

If you have any questions regarding this matter, please do not hesitate to call.

Very truly yours,  
CHAPPELL ENGINEERING ASSOCIATES

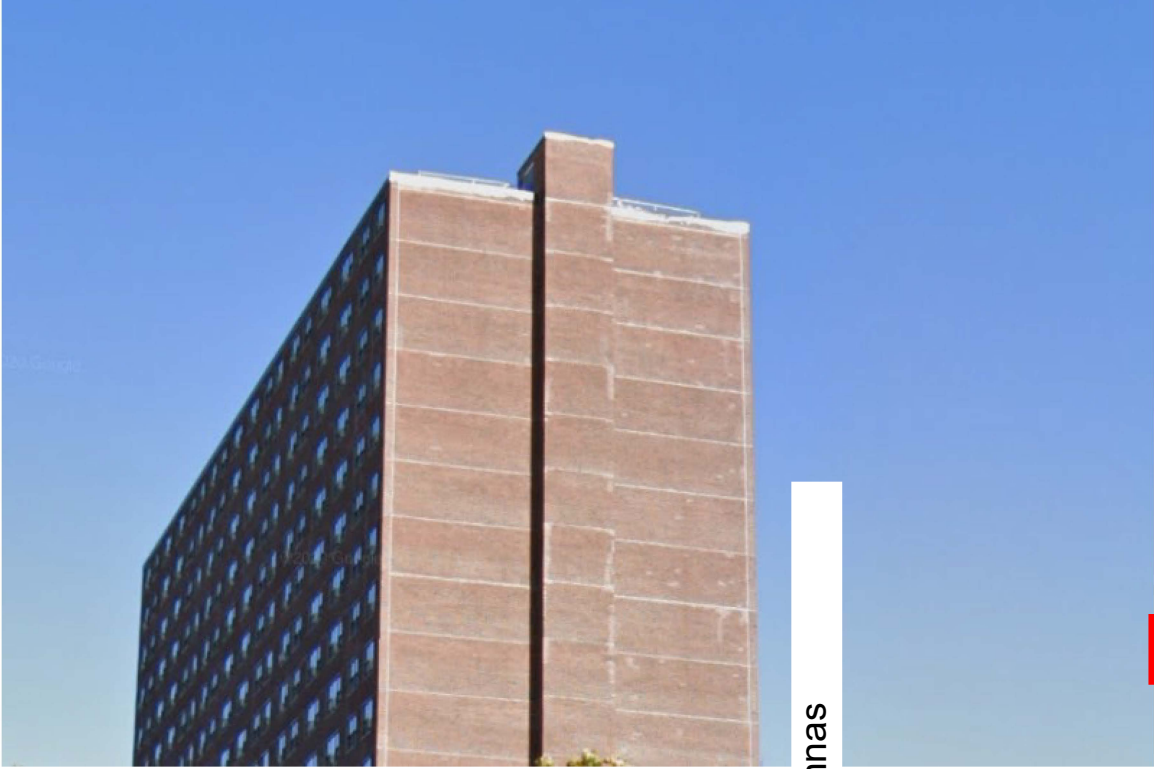


Clement J. Salek, P.E.  
CJS/cjs

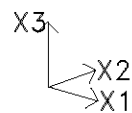




Proposed location of cantilever equipment frame

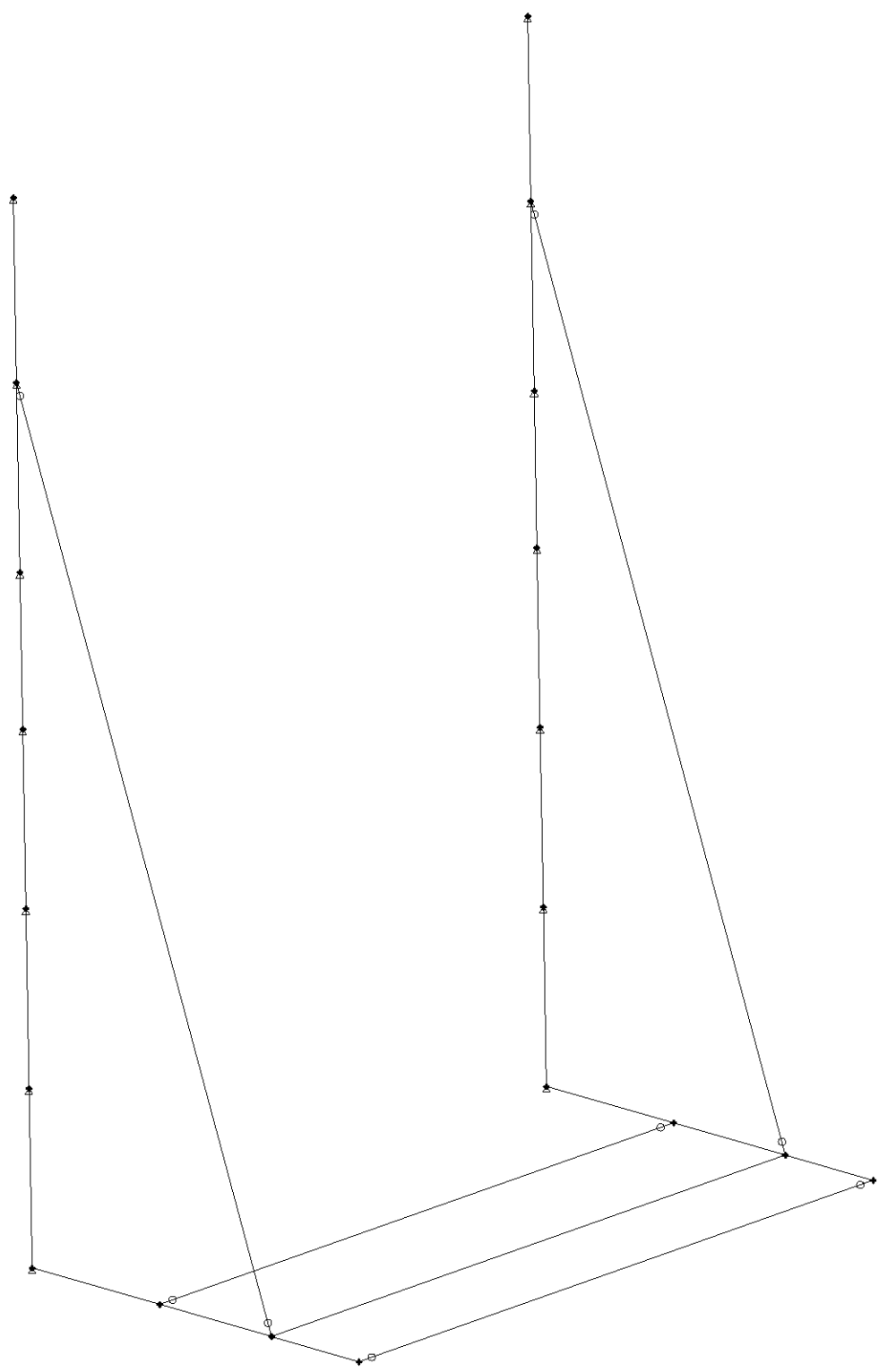


Proposed location of Beta sector antennas



SCALE = 1:18

DATE: 6/25/21



MA2009 Rindge Ave Cambridge MA

**Prepared by:****Page:** 1**Date:** 6/25/21**Load no. 1: Cabinet Loads (units - kips ft.)**

/ GLOBAL LOADS

/ GLOBAL LOADS

/ GLOBAL LOADS

DIST FX3 -0.042 PLANE 4.1 -2.4 0. 4.1 0.6 0. 1.1 0.6 0. PT 0.

3. BEAMS

DIST FX3 -0.19 PLANE 4.1 -5.6 0. 4.1 -2.6 0. 1.1 -2.6 0. PT 0.

3. BEAMS

/ END

**FORCE SUMMATION**

FX1=0. kip

FX2=0. kip

FX3=-2.0879 kip

**Load no. 2: Selfweight (units - kips ft.)**

/ BEAM LOADS

SELF X3 -1. B 1 2 4 TO 20 22 23

/ BEAM LOADS

SELF X3 -1. B 21

/ END STATIC

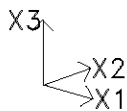
**FORCE SUMMATION**

FX1=0. kip

FX2=0. kip

FX3=-0.4091 kip

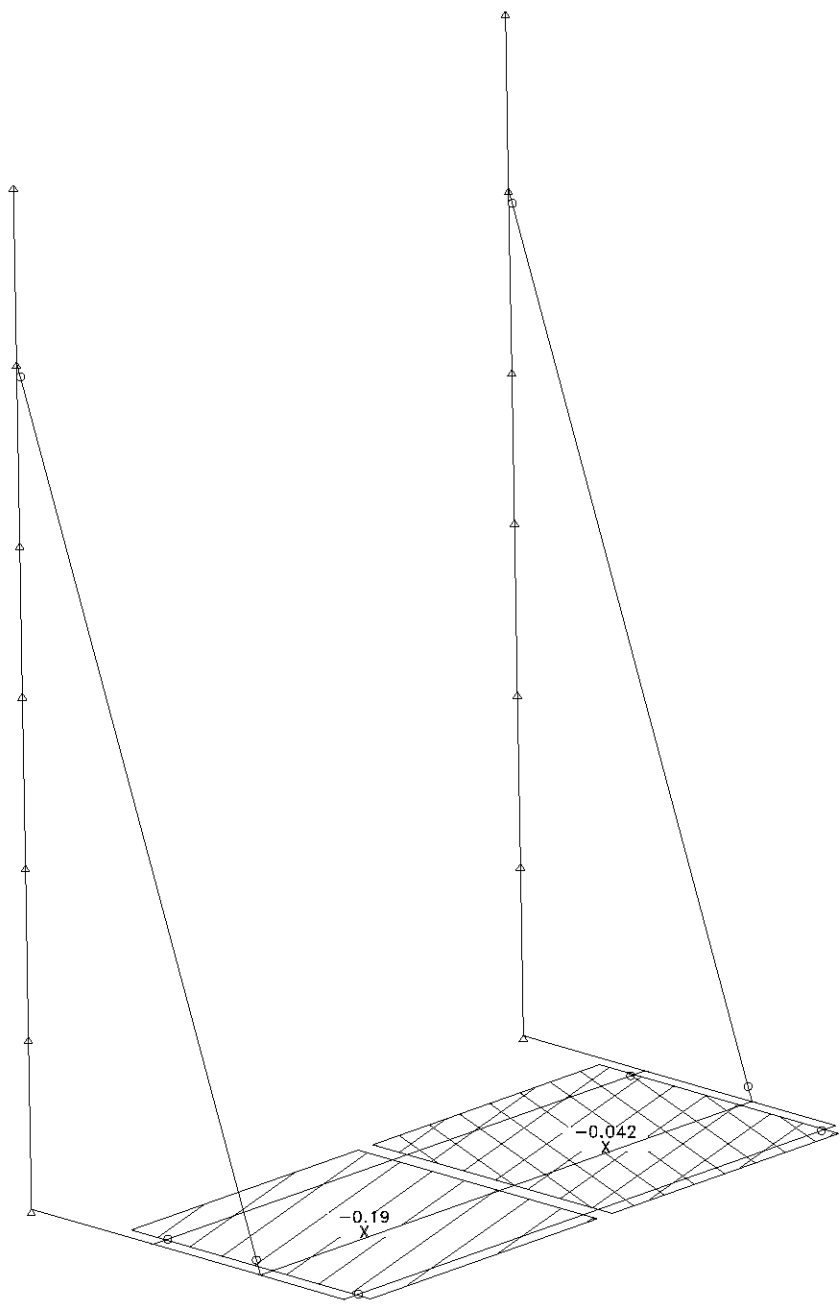
Load 1: Cabinet Loads



SCALE = 1:21

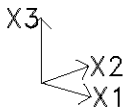
UNITS: kip ft

DATE: 6/25/21





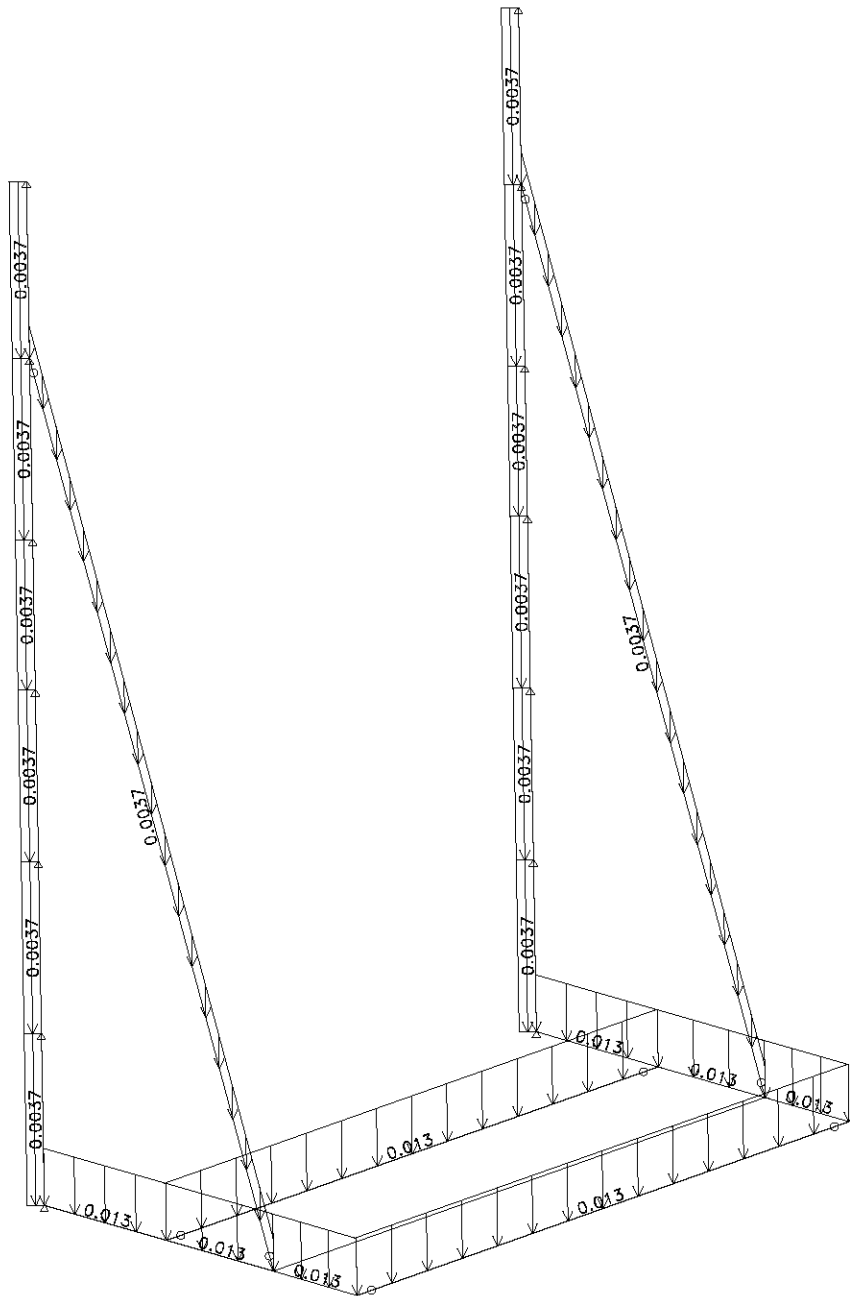
Load 2: Selfweight

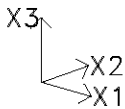


SCALE = 1:21

UNITS: kip ft

DATE: 6/25/21

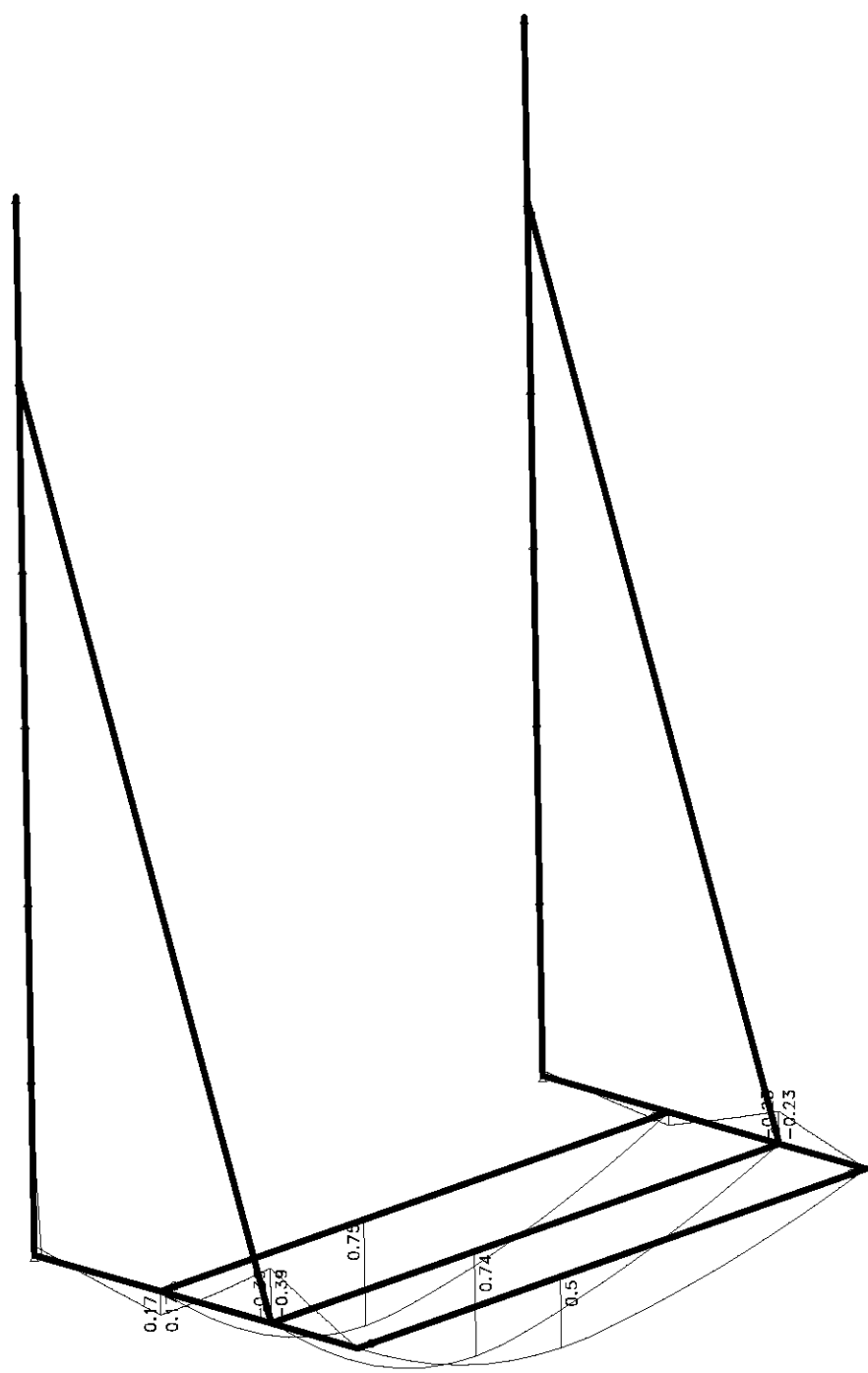




SCALE = 1:20

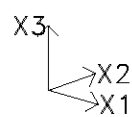
UNITS: kip\*ft

DATE: 6/25/21



M2 MOMENT

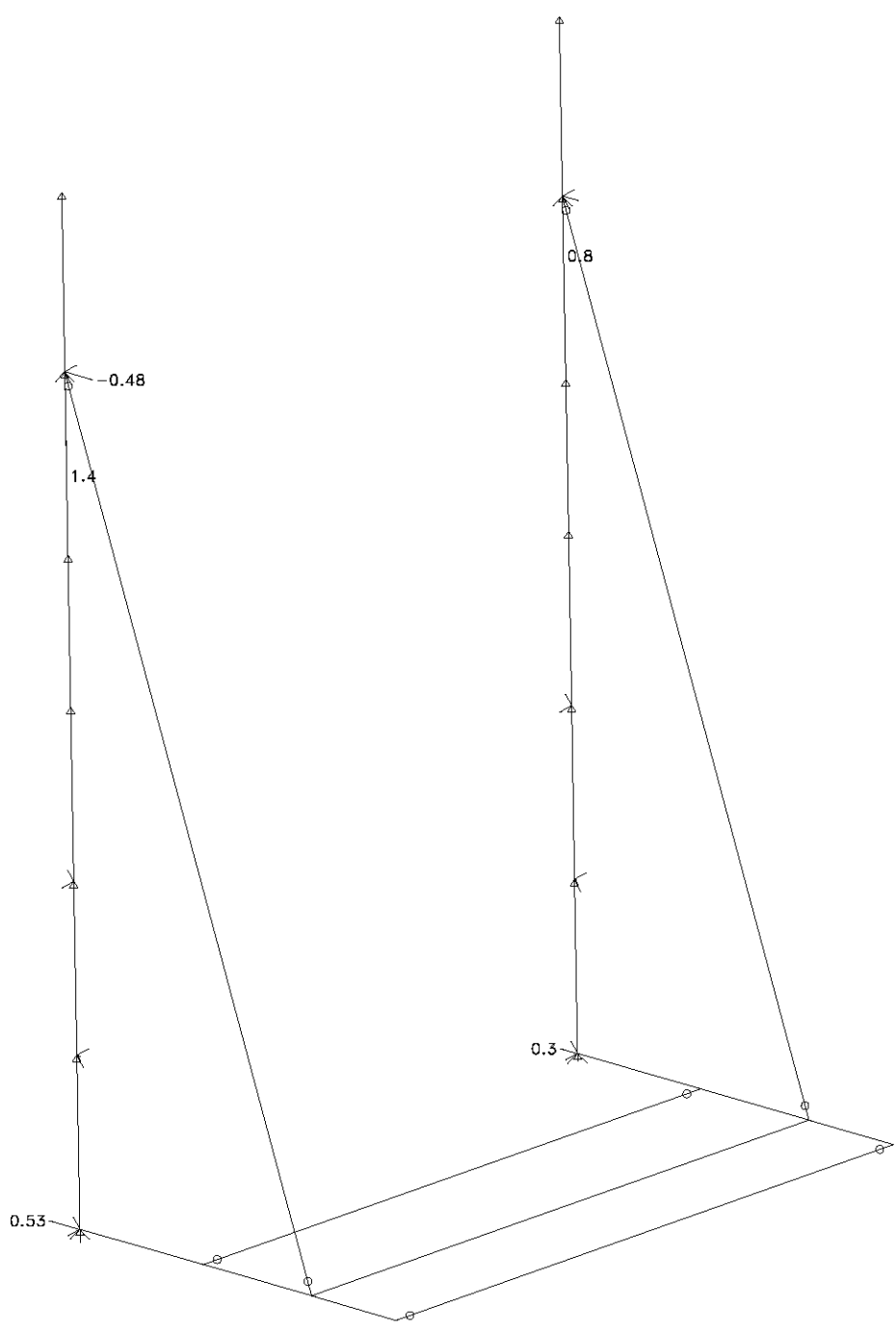
COMB. NO. 1 Total Loads



SCALE = 1:20

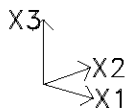
UNITS: kip

DATE: 6/25/21



REACTIONS    COMB. NO. 1    Total Loads

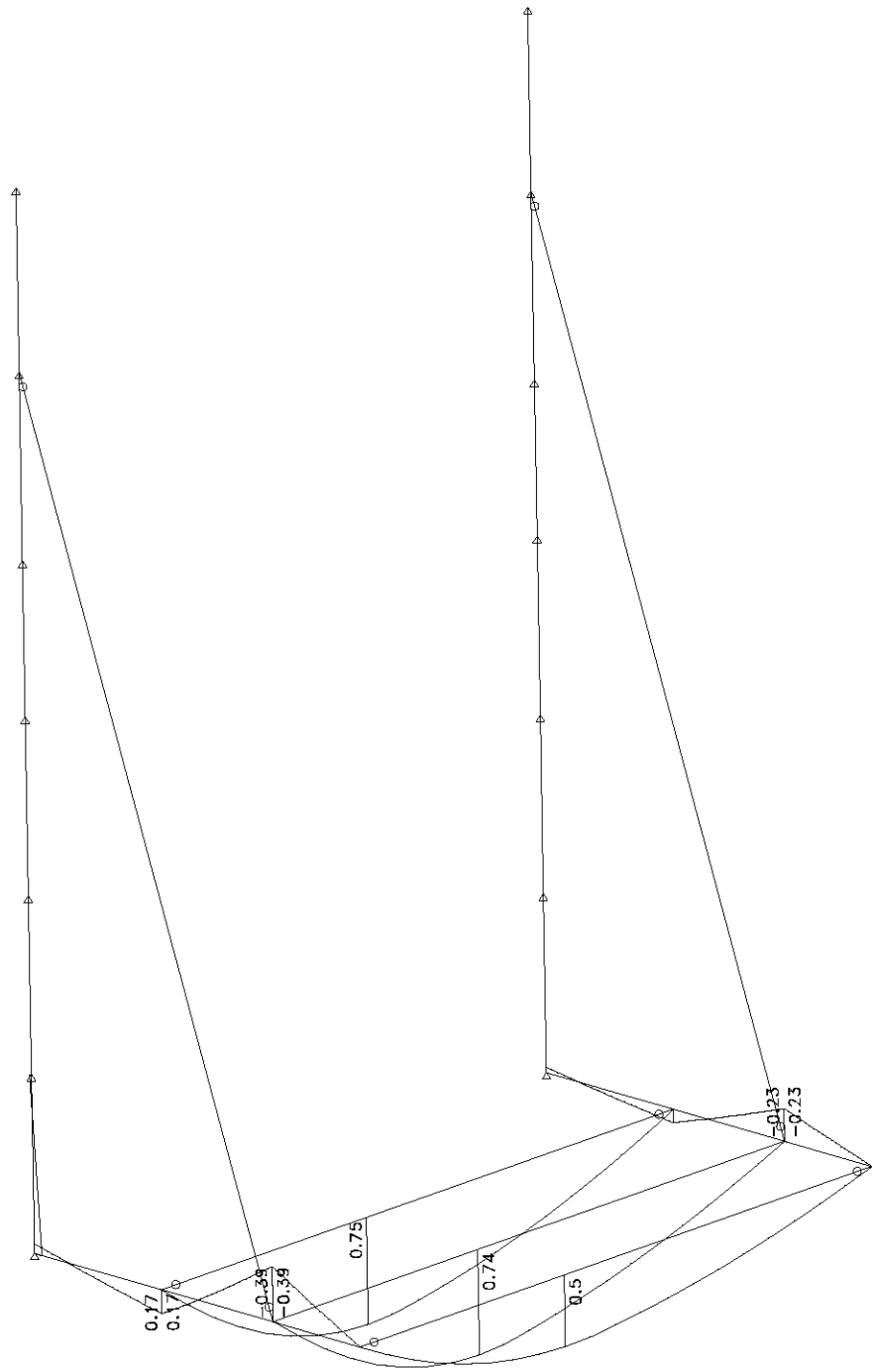




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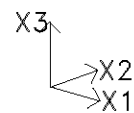
UNITS: kip\*ft

DATE: 6/25/21



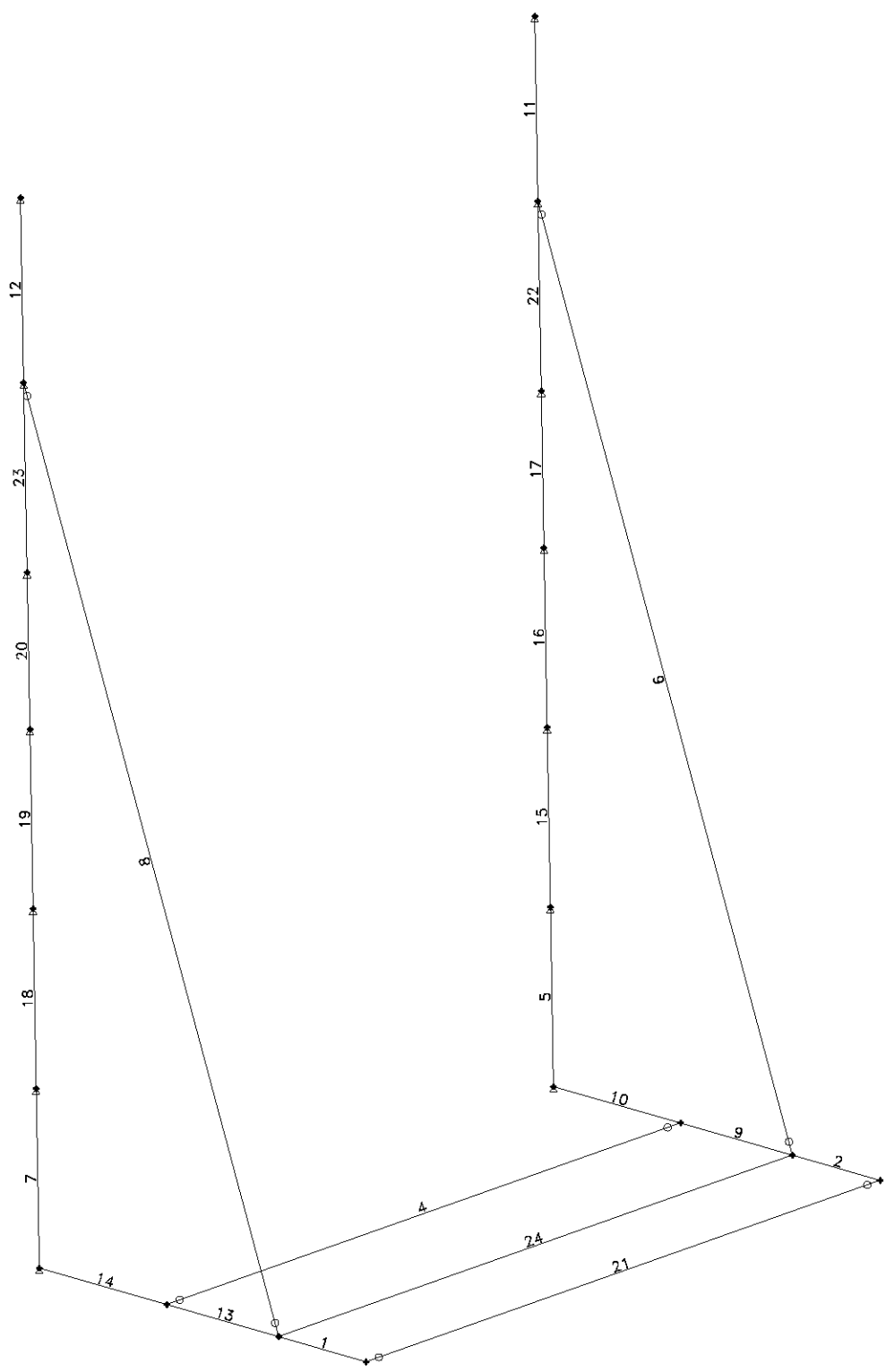
M2 MOMENT

COMB. NO. 1 Total Loads



SCALE = 1:18

DATE: 6/25/21



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Beam	Section	Com	Defl L/	Slen	CAPACITY					Combined Axial+Mom	
					Axial	Dir	Shear	Mom	LTB		
4	W 4x13	1	4745	78	0.00	MJ	0.03	0.07	0.08	0.08	
6	L 3x3x3/16	1	9999	174	0.04	MJ	0.00	0.02	0.02	0.05	
8	L 3x3x3/16	1	9999	174	0.06	MJ	0.00	0.02	0.02	0.08	
10	W 4x13	1	9999	45	0.00	MJ	0.02	0.02	0.02	0.02	
11	L 3x3x3/16	1	9999	198	0.00	MJ	0.00	0.05	0.05	0.06	
12	L 3x3x3/16	1	9999	198	0.00	MJ	0.01	0.09	0.09	0.10	
14	W 4x13	1	9999	45	-0.01	MJ	0.03	0.04	0.04	0.04	
21	W 4x13	1	7043	78	0.00	MJ	0.02	0.05	0.05	0.05	
24	W 4x13	1	4867	78	0.00	MJ	0.03	0.07	0.08	0.08	



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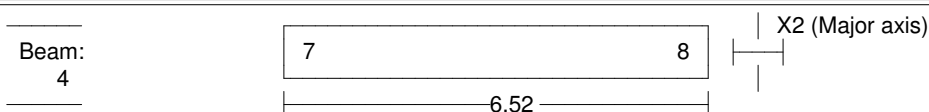
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Prepared by:

**Detailed Results Table for Beam 4**

Moments: kips\*foot , Forces: kips , Stresses: ksi , Section prop.: inch

**CONSTRAINTS**

- Sections : Check  
 - Steel Grade: A36

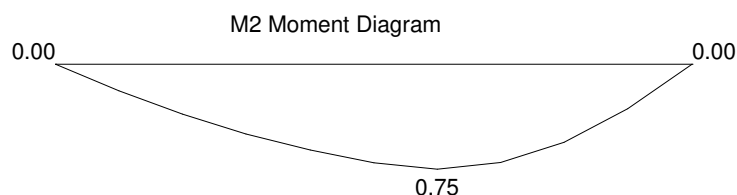
**DESIGN DATA**

- Kx = 1.00 - Ky = 1.00  
 - Allow. Slend. : 200 (compr.) 300 (tens.)  
 - Allowable Deflection : 1/240  
 - Tension Area Reduction Factor : 1.00  
 - Building type : Unbraced

Section: W 4x13

Ix = 11.30 Iy = 3.86in4 Sx = 5.43 Sy = 1.90in3 Area = 3.83  
 hw = 4.16 bf = 4.06in tw = 0.28 tf = 0.35in  
 J = 0.15 Cw = 11.17in6

DESIGN COMBINATION = 1



Max. AXIAL Force = 0.00 (compr.) Max. SHEAR Force = 0.52

SECTION CLASSIFICATION: \*\*\* COMPACT \*\*\*

Limiting Ratios: Compact Non-Compact  
 d/t= 14.89 < 106.7 163.5 (Fy= 36.0 R= 0.000 )  
 b/t= 5.86 < 10.8 15.8

DESIGN	EQUATION	FACTORS	VALUES	RESULT
V3 Shear (F4-1)	$V/(A_v F_v) < 1.00$ $F_v = 0.4 F_y$	$A_v = 1.16$	$V = 0.52$ $F_v = 14.40$	0.03
M2 Moment (F1-1)	$\frac{M}{S F_b} < 1.00$	$S = 5.43$ $F_b = 0.660 F_y$	$M = 0.75$ $S F_b = 10.76$	0.07
Deflection	$\frac{\text{defl.}}{L / 240} < 1.00$		$\text{defl} = 0.01648$	0.05
Combined Stresses (Local) (H1-2) (H2-1)	$\frac{f_a}{0.6 F_y} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} < 1.00$	$f_{bx} = 1.65$ $F_{bx} = 23.76$ $f_{by} = 0.00$ $F_{by} = 0.00$	$P = 0.00$ $A = 3.83$ $F_u = 58.00$ $f_b = M/S$	0.07
Moment - noncompact (F1-8)	$\frac{M}{S F_b} < 1.00$ Critical Segment from 0.00 to 6.52 on +z flange Segment End Moments: 0.00 and 0.00	$S = 5.43$ $R_T = 1.12$ $L_b = 6.52$	$M = 0.75$ $S F_b = 9.79$ $C_b = 1.00$	0.08

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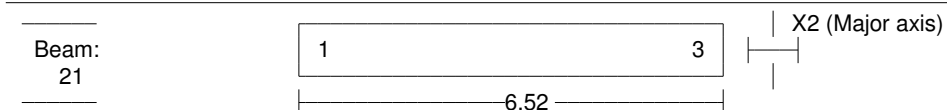
**Detailed Results Table for Beam 4**

Moments: kips\*foot , Forces: kips , Stresses: ksi , Section prop.: inch

DESIGN	EQUATION	FACTORS	VALUES	RESULT
Combined Stresses (tension) (H2-1)	$\frac{f_a}{F_t} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} < 1.00$	Fbx = 21.60 Fby = 27.00	f <sub>bx</sub> = 1.65 f <sub>by</sub> = 0.00	0.08

**Detailed Results Table for Beam 21**

Moments: kips\*foot , Forces: kips , Stresses: ksi , Section prop.: inch



## CONSTRAINTS

- Sections : Check  
- Steel Grade: A36

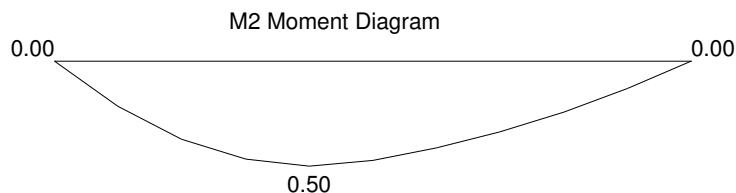
## DESIGN DATA

- K<sub>x</sub> = 1.00      - K<sub>y</sub> = 1.00  
- Allow. Slend. : 200 (compr.) 300 (tens.)  
- Allowable Deflection : 1/240  
- Tension Area Reduction Factor : 1.00  
- Building type : Unbraced

Section: W 4x13

I<sub>x</sub> = 11.30 I<sub>y</sub> = 3.86in<sup>4</sup> S<sub>x</sub> = 5.43 S<sub>y</sub> = 1.90in<sup>3</sup> Area = 3.83  
h<sub>w</sub> = 4.16 b<sub>f</sub> = 4.06in t<sub>w</sub> = 0.28 t<sub>f</sub> = 0.35in  
J = 0.15 C<sub>w</sub> = 11.17in<sup>6</sup>

DESIGN COMBINATION = 1



Max. AXIAL Force = 0.00 (tens.) Max. SHEAR Force = 0.35

SECTION CLASSIFICATION: \*\*\* COMPACT \*\*\*

Limiting Ratios:      Compact Non-Compact  
d/t = 14.89 < 106.7      163.5  
b/t = 5.86 < 10.8      15.8  
(F<sub>y</sub> = 36.0 R = 0.000)

DESIGN	EQUATION	FACTORS	VALUES	RESULT
V3 Shear (F4-1)	$\frac{V}{A_v F_v} < 1.00$ F <sub>v</sub> = 0.4 * F <sub>y</sub>	A <sub>v</sub> = 1.16	V = 0.35 F <sub>v</sub> = 14.40	0.02
M2 Moment (F1-1)	$\frac{M}{S F_b} < 1.00$	S = 5.43 F <sub>b</sub> = 0.660 * F <sub>y</sub>	M = 0.50 S * F <sub>b</sub> = 10.76	0.05

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**Detailed Results Table for Beam 21**

Moments: kips\*foot , Forces: kips , Stresses: ksi , Section prop.: inch

DESIGN	EQUATION	FACTORS	VALUES	RESULT
Deflection	$\frac{\text{defl.}}{L / 240} < 1.00$		defl = 0.01111	0.03
Combined Stresses (Local) (H1-2) (H2-1)	$\frac{f_a}{0.6F_y} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} < 1.00$	$f_{bx} = 1.10$ $F_{bx} = 23.76$ $f_{by} = 0.00$ $F_{by} = 0.00$	$P = 0.00$ $A = 3.83$ $F_u = 58.00$ $f_b = M/S$	0.05
Moment - noncompact (F1-8)	$\frac{M}{S^*F_b} < 1.00$ Critical Segment from 0.00 to 6.52 on +z flange Segment End Moments: 0.00 and 0.00	$S = 5.43$ $RT = 1.12$ $L_b = 6.52$	$M = 0.50$ $S^*F_b = 9.79$ $C_b = 1.00$	0.05
Combined Stresses (tension) (H2-1)	$\frac{f_a}{F_t} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} < 1.00$	$F_{bx} = 21.60$ $F_{by} = 27.00$	$f_{bx} = 1.10$ $f_{by} = 0.00$	0.05

**Detailed Results Table for Beam 1**

Moments: kips\*foot , Forces: kips , Stresses: ksi , Section prop.: inch

Beam: 14, 13, 1	2	1	X2 (Major axis)
	3.93		

## CONSTRAINTS

- Sections : Check  
- Steel Grade: A36

## DESIGN DATA

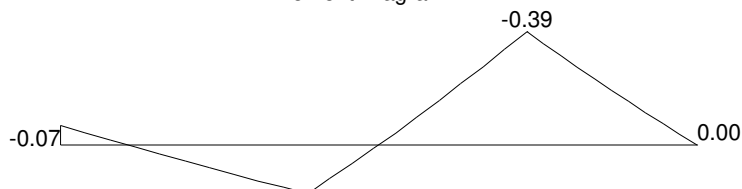
-  $K_x = 1.00$  -  $K_y = 1.00$   
- Allow. Slend. : 200 (compr.) 300 (tens.)  
- Allowable Deflection : 1/240  
- Tension Area Reduction Factor : 1.00  
- Building type : Unbraced

Section: W 4x13

$I_x = 11.30$   $I_y = 3.86$   $S_x = 5.43$   $S_y = 1.90$  Area = 3.83  
 $h_w = 4.16$   $b_f = 4.06$   $t_w = 0.28$   $t_f = 0.35$   
 $J = 0.15$   $C_w = 11.17$

DESIGN COMBINATION = 1

M2 Moment Diagram



Max. AXIAL Force = -0.48 (compr.) Max. SHEAR Force = 0.44

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**Detailed Results Table for Beam 1**

Moments: kips\*foot , Forces: kips , Stresses: ksi , Section prop.: inch

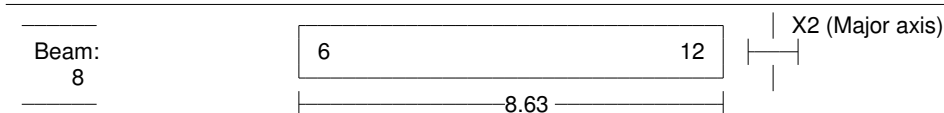
SECTION CLASSIFICATION: \*\*\* COMPACT \*\*\*

Limiting Ratios: Compact Non-Compact  
 $d/t = 14.89 < 105.3$  163.5 (Fy = 36.0 R = 0.003)  
 $b/t = 5.86 < 10.8$  15.8

DESIGN	EQUATION	FACTORS	VALUES	RESULT
V3 Shear (F4-1)	$V/(A_v F_v) < 1.00$ $F_v = 0.4 F_y$	$A_v = 1.16$	$V = 0.44$ $F_v = 14.40$	0.03
M2 Moment (F1-1)	$\frac{M}{S F_b} < 1.00$	$S = 5.43$ $F_b = 0.660 F_y$	$M = 0.39$ $S F_b = 10.76$	0.04
Combined Stresses (Local) (H1-2) (H2-1)	$\frac{f_a}{0.6 F_y} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} < 1.00$ (Ft)	$f_{bx} = 0.86$ $F_{bx} = 23.76$ $f_{by} = 0.00$ $F_{by} = 27.00$	$P = 0.48$ $A = 3.83$ $F_u = 58.00$ $f_b = M/S$	0.04
Axial Force (E2-1/2)	$\frac{f_a}{F_a} < 1.00$	$(kL/r)_x = 26$ $(kL/r)_y = 45$ $C_c = 126.31$	$P = 0.48$ $A_g = 3.83$ $F_a = 18.79$	0.01
Combined Stresses (compress.) (H1-1)	$\frac{f_a}{F_a} + \frac{f_{bx} C_m}{E_x F_{bx}} + \frac{f_{by} C_m}{E_y F_{by}} < 1.00$	$C_m x = 0.85$ $C_m y = 0.85$ $E_x = 1.00$ $E_y = 1.00$	$f_{bx} = 0.86$ $f_{by} = 0.00$ $F_{bx} = 23.76$ $F_{by} = 27.00$	0.04

**Detailed Results Table for Beam 8**

Moments: kips\*foot , Forces: kips , Stresses: ksi , Section prop.: inch



## CONSTRAINTS

- Sections : Check  
 - Steel Grade: A36

## DESIGN DATA

-  $K_x = 1.00$  -  $K_y = 1.00$   
 - Allow. Slend. : 200 (compr.) 300 (tens.)  
 - Allowable Deflection : 1/240  
 - Tension Area Reduction Factor : 1.00  
 - Building type : Unbraced

Section: L 3x3x3/16

$I_x = 0.96$   $I_y = 0.96$   $I_n^4$   $S_x = 0.44$   $S_y = 0.44$   $I_n^3$  Area = 1.09  
 $h = 3.00$   $b = 3.00$   $t = 0.19$   $e_y = 2.18$   $e_x = 2.18$   
 $J = 0.01$   $C_w = 0.00$   $I_n^6$   $I_v = 0.39$   $I_n^4$

DESIGN COMBINATION = 1



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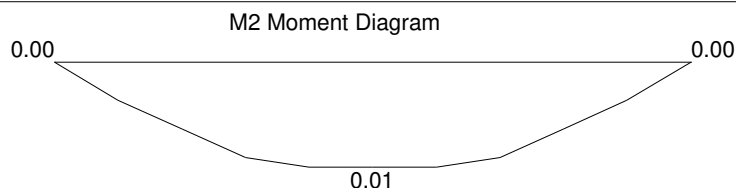
Prepared by:

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**Detailed Results Table for Beam 8**

Moments: kips\*foot , Forces: kips , Stresses: ksi , Section prop.: inch



Max. AXIAL Force = 1.46 (tens.) Max. SHEAR Force = 0.01

SECTION CLASSIFICATION: \*\*\* SLENDER \*\*\*

Limiting Ratios: Compact Non-Compact  
 $d/t = 15.87 < 12.7$   $12.7$  (Fy = 36.0)  
 $b/t = 15.87 < 12.7$

DESIGN	EQUATION	FACTORS	VALUES	RESULT
M2 Moment (A-B5)	$\frac{M}{S \cdot F_b} < 1.00$	$S = 0.44$ $F_b = 0.549 \cdot F_y$	$M = 0.01$ $S \cdot F_b = 0.73$	0.02
Combined Stresses (Local) (H1-2) (H2-1)	$\frac{f_a}{0.6 F_y} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} < 1.00$ (Ft)	$f_{bx} = 0.31$ $F_{bx} = 19.75$ $f_{by} = 0.00$ $F_{by} = 0.00$  ( -0.05 + 0.02 + 0.00 ) at: Long leg tip	$P = 1.46$ $A = 1.09$ $F_u = 58.00$ $f_b = M/S$	0.06
Axial Force (D1)	$\frac{F}{0.60 A_g F_y} < 1.00$	$(kL/r)_x = 110$ $(kL/r)_y = 174$	$P = 1.46$ $A_g = 1.09$ $F_y = 36.00$	0.06
Lateral Torsional Buckling (5-6)	$\frac{M}{S \cdot F_b} < 1.00$  Critical Segment from 0.00 to 8.63 on +z flange Segment End Moments: 0.00 and 0.00	$S = 0.44$ $F_{ob} = 87.73$ $F_b = 19.75$ $L_b = 8.63$	$M = 0.01$ $S \cdot F_b = 0.73$  $C_b = 1.00$	0.02
Combined Stresses (tension) (H2-1)	$\frac{f_a}{F_t} + \frac{f_{bx}}{F_{bx}} + \frac{f_{by}}{F_{by}} < 1.00$	$F_{bx} = 19.75$ $F_{by} = 19.75$	$f_{bx} = 0.31$ $f_{by} = 0.00$	0.08